

FM 101-10-1/2

**STAFF OFFICERS' FIELD MANUAL
ORGANIZATIONAL, TECHNICAL, AND LOGISTICAL
DATA PLANNING FACTORS
(VOLUME 2)**

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**OCTOBER 1987
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DEPARTMENT OF THE ARMY
Washington, DC, 17 July 1990

STAFF OFFICERS' FIELD MANUAL
ORGANIZATIONAL, TECHNICAL, AND LOGISTICAL DATA PLANNING FACTORS (VOLUME 2)

1. Change FM 101-10-1/2, 7 October 1987, as follows:

Page 2-5. Add a "9" in Note column for Classes of Supply II, III, VIII, and IX. Add the following note at the bottom of the page: "9. Per Institute of Defense Analyses (IDA) final study, Nov 1988, subject: Consumption Rates for Chemical Defense Equipment (CDE), additional consumption planning factors for CDE for Northwest Asia, Southeast Asia, and Europe are reflected in Table 2-3a." Add the following table to the right of Table 2-3:

Table 2-3a. Theater-Level Average Consumption Rates for Chemical Defense Equipment (CDE) in Northeast Asia, Southwest Asia, and Europe (Pounds per person per day)

Class of Supply	Consumption Rate	Location	Note
II	3.998	S.W. Asia	1, 2
III/VIII/IX	0.085	S.W. Asia	1, 2
Total CDE consumption planning factor for S.W. Asia is 4.083 lbs/person/day.			
II	3.128	N.E. Asia	1, 2
III/VIII/IX	0.142	N.E. Asia	1, 2
Total CDE consumption planning factor for N.E. Asia is 3.270 lbs/person/day			
II	2.050	Europe	1, 2
III/VIII/IX	0.155	Europe	1, 2
Total CDE consumption planning factor for Europe is 2.205 lbs/person/day			

Notes:

1. Consumption planning factors are for up to 30 days.
2. Consumption planning factors assume troops change chemical protective suit and chemical protective boots every 30 days unless mandated earlier by METT-T.

2. File this change in the front of the publication.

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STAFF OFFICERS' FIELD MANUAL ORGANIZATIONAL, TECHNICAL, AND LOGISTICAL DATA PLANNING FACTORS (VOLUME 2)

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FM 101-10-1

PREFACE

This second volume of Field Manual (FM) 101-10-1 contains planning factors for engineer, supply, transportation and movement, personnel service support, health service support planning for evacuation and hospitalization, and operational force requirements planning. It incorporates the latest developments and changes available to support the Airland Battle doctrine and the Army of Excellence.

This field manual is for use by staff officers at all echelons as a guide for obtaining planning data in support of combat operations. It provides data which can be applied to combat, combat support, and combat service support units from theater through company. Unless otherwise stated, whenever the masculine gender is used in this manual, both men and women are included in the reference.

Volume I of FM 101-10-1 provides the organizational structure, personnel, and equipment for divisions, separate brigades, airborne special forces groups, and armored cavalry regiments. FM 101-10-2 contains the organizational and personnel structure for theater and corps functional units.

Chapter 1 contains engineer planning data for specialized tasks in each major engineer mission area:

mobility, countermobility, survivability, general engineering, and topographic operations which support combat operations. Data listed are intended only to be a guide for division or higher level staff planners. The United States Army Engineer School at Fort Belvoir, Virginia, is the proponent for this first chapter.

Chapter 2 contains supply planning data to include the food, water, clothing, equipment, arms, ammunition, fuel, and materials needed to conduct combat operations. The proponent for Chapter 3 is the United States Army Logistics Center at Fort Lee, Virginia.

Chapter 3 provides detailed transportation and movement planning data used for computing transportation requirements in support of military operations by air, motor, rail, and water. The United States Army Logistics Center at Fort Lee, Virginia, is the proponent for Chapter 3.

Chapter 4 contains planning data for strength accounting, replacement operations, casualty forecasting and reporting, and administrative services. The proponent for this chapter is the United States Army Soldiers Support Center at Fort Benjamin Harrison, Indiana.

Chapter 5 presents health service support planning data for evacuation and hospitalization. The United States Army Academy of Health Sciences, Fort Sam Houston, Texas, is the proponent for this chapter.

Chapter 6 contains guide for operational force requirements planning. It includes general background material and information on combat service support development, planning procedures, combat service support structure, and combat service support development. The proponent for this chapter is the United States Army Command and General Staff College, Fort Leavenworth, Kansas.

Users of this publication are encouraged to recommend changes and to submit comments for its improvement. Please key comments to the specific page and paragraph for which the change is recommended. Provide a reason for each comment to ensure that it can be completely understood and evaluated. To send changes or comments, prepare DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forward it to the Commandant, US Army Command and General Staff College, ATTN: ATZL-SWA-DL, Fort Leavenworth, Kansas 66027-6900, or send comments directly to the responsible proponent indicated for each chapter.

CHAPTER 1

ENGINEER PLANNING DATA

SECTION I. PLANNING CONSIDERATIONS

1-1. INTRODUCTION. This chapter contains engineer planning data for specialized tasks in each of the major engineer mission areas (mobility, countermobility, survivability, general engineering, and

topographic operations) that support combat operations. The data listed are intended only to be a guide for commanders and higher-level (division and above) staff planners. Substantiated local data and applica-

ble references should be used when greater detail in planning is required. The United States Army Engineers School, Fort Belvoir, VA, is the proponent for this chapter.

SECTION II. MOBILITY PLANNING DATA

1-2. TASKS. Mobility support includes those tasks which allow units, equipment, and supplies to be positioned where they are needed on the air-land battle-field. Engineer support is necessary when an organization cannot overcome the effect of an obsta-

cle in stride. The data in this section provide the planner with estimates of time, material, and manpower requirements for mobility tasks normally associated with engineer support.

1-3. RIVER- AND GAP-CROSSING EQUIPMENT.
a. Table 1-1 lists the characteristics of the pneumatic 15-man assault boat. For details, see FM 5-34, FM 31-60, and TM 5-201.

Table 1-1. Characteristics of the Pneumatic 15-Man Assault Boat

ALLOCATION PER UNIT	TRANSPORT REQUIREMENTS	SIZE PARAMETERS	CAPABILITIES	ASSEMBLY TIME	PROPULSION
18 per Div Engr Bn or 70 per Corps Ft Brg Co or 9 per Sep Bde Engr Co	One 2-1/2 ton truck can carry 20 deflated boats 8 men can carry one inflated boat	1 deflated boat weighs 250 lbs Boat's size: 5.2m (17') x 1.7m (5.7') x .85m (34")	12 Inf and 3 Engr w/paddles 12 Inf and 2 Engr w/OBM ¹ or 3375 lbs equip	5-10 min w/pumps Paddled speed is 1.5 mps (5 fps) or OMB ¹ speed is 4.6 mps (15 fps)	

FOOTNOTE:

¹OBM = outboard motor.

CONSIDERATIONS:

- 1.5 mps/5 fps with paddles; greater current may exceed control ability and return by engineer crew.
- 3.5 mps (11 fps) current is the maximum current speed which can be negotiated with an outboard motor.
- 10 separate compartments per boat, 50% of which can still carry load when punctured.
- Accelerate OBM gradually.
- 3 pumps and 11 paddles are required per boat.

b. Tables 1-2 through 1-6 list the characteristics of rafts. Various sizes of rafts capable of carrying light tactical vehicles or the heaviest division loads can be constructed from standard river-crossing equipment.

When required, preparation or construction of roads and approaches normally is more time-consuming than raft construction. Site preparation time, rather than raft construction time, normally is the deciding

factor in arriving at operational times for rafts. Commanders and staff planners must exercise caution in using the construction times listed in Tables 1-2 through 1-6 to determine operational times for rafts.

Table 1-2. Characteristics of Light Tactical Rafts

GENERAL:

ALLOCATION PER UNIT	TRANSPORT REQUIREMENTS	SIZE PARAMETERS
6 sets per Corps Ft Btg Co	1 set on two 2-1/2 ton truck and 1 pole trailer	1 set has 4 pontoon and 4 deck bays --- Each 3.35m (11') bay weighs 2860 lb.

ITEM-CONTINGENT:

FEATURES	ITEM	ASSEMBLY CHARACTERISTICS		CROSSING TYPE ²	CAPACITY (CLASS) CHARACTERISTICS ⁵					
		TIME ³	LOAD SPACE		CURRENT VELOCITY (mps/fps)					
1 set makes 1 raft of CL16 in 1.5 mps (5 fps) current	4 pontoons/3 bay w/articulators	30 min	9.15m (30')	N	1.5/5	2/7	2.5/8	2.75/9	3/10	3.5/11
Best raft built from 1 set is 4 pontoon, 3 deck bays	4 pontoons/3 bay w/o articulators	25 min	9.15m (30')	R	12	12	12	8	4	0
---	4 pontoons/4 bay w/articulators	36 min	12.5m (41')	N	14	14	14	12	8	4
---	5 pontoons/5 bay w/articulators	40 min	15.85m (52')	N	16	16	12	8	4	0
Raft powered w/25 hp OBM ¹ per pontoon or 27' BEB ² or flying ferry	6 pontoons/4 bay w/articulators	45 min	12.5m (41')	R	20	20	16	12	8	4
Minimum of 3 OBM ¹ for a 4 pontoon raft	6 pontoons/4 bay w/o articulators	40 min	12.5m (41')	N	10	10	10	6	2	0
---	6 pontoons/5 bay w/o articulators	45 min	15.85m (52')	R	12	12	12	10	6	2
OBMs ¹ and BEBs must be ordered separately, not in sets	6 pontoons/4 bay w/articulators	45 min	12.5m (41')	N	9	9	9	8	5	2
	6 pontoons/5 bay w/o articulators	45 min	15.85m (52')	R	11	11	11	11	9	6
	6 pontoons/4 bay w/articulators	45 min	12.5m (41')	N	16	14	11	8	5	2
	6 pontoons/5 bay w/o articulators	45 min	15.85m (52')	R	19	17	15	12	9	6
	6 pontoons/4 bay w/articulators	45 min	12.5m (41')	N	13	13	13	13	12	5
	6 pontoons/5 bay w/o articulators	45 min	15.85m (52')	R	15	15	15	15	15	11
	6 pontoons/4 bay w/articulators	45 min	12.5m (41')	N	17	17	17	17	16	9
	6 pontoons/5 bay w/o articulators	45 min	15.85m (52')	R	21	21	21	21	18	11
	6 pontoons/4 bay w/articulators	45 min	12.5m (41')	N	18	18	18	18	18	12
	6 pontoons/5 bay w/o articulators	45 min	15.85m (52')	R	22	22	22	22	17	11

FOOTNOTES:

- ¹OBM = outboard motor.
- ²BEB = bridge erection boat.
- ³Assembly time increased by 50% at night.
- ⁴N = normal; R = risk.
- ⁵Classification : wheeled vehicle/tracked vehicle.

CONSIDERATIONS:

- Minimum assembly site = 10m (33 ft) x 15m (50 ft).
- Draft for —
OBM = 0.6m (24").
BEB = 1.04m (41").
- Roadway width = 2.7m (9').
- Ramp articulates —
Up—1m (41").
Down—0.48m (19").

Table 1-3. Characteristics of Class 60 Rafts

GENERAL:			ITEM-CONTINGENT:				CAPACITY (CLASS) CHARACTERISTICS ¹						
ALLOCATION PER UNIT	TRANSPORT REQUIREMENTS	FEATURES	ASSEMBLY CHARACTERISTICS										
			ITEM	EQUIPMENT	MANPOWER	TIME		ASSEMBLY TYPE					
						ASSEMBLED	UNASSEMBLED		LOAD SPACE	CURRENT VELOCITY	(mps/fps)		
Item is found only in Class 60 Ft Brg Co	200m (656') for 5 sets	1 set makes only 1 raft powered by 27' BEB	1 normal raft	5 brg trucks 2 pwr boats	1 platoon	3/4 hrs	1-3/4 hrs	4N 5N	15m (51') 20m (66')	40/45 50/55	40/45 50/55	35/40 45/50	25/30 40/45
	1 disassembled normal bay 3m (10') per 5-ton brg truck		1 reinforced raft	5 brg trucks 2 pwr boats	1 platoon	3/4 hrs	1-3/4 hrs	5R 6R	15m (51') 16m (54')	55/60 65/75	50/55 65/75	50/55 65/70	45/50 50/50

FOOTNOTE:¹Classification: wheeled vehicle/tracked vehicle.**CONSIDERATIONS:**

- In assembly type: N = normal; R = reinforced.
- When assembled at river, 40 x 40m (120' x 120') area required.
- Draft: raft/bridge = 0.75m (29"); bridge boat = 1m (40").
- Roadway: 4m (13'2").
- Assembly crew required in addition to bridge company personnel.
- Normal site preparation and anchorage time concurrent with assembly.
- Air compressor needed, crane needed per raft/bridge construction site.
- Anchorages (see FM 5-34).
- BEB = bridge erection boat.

Table 1-4. Characteristics of M4T6 Rafts

GENERAL:			ITEM-CONTINGENT:			CAPACITY (CLASS) CHARACTERISTICS ¹							
ALLOCATION PER UNIT		TRANSPORT REQUIREMENTS	FEATURES	ASSEMBLY CHARACTERISTICS		TIME ²		CAPACITY (CLASS) CHARACTERISTICS ¹					
			ITEM	EQUIPMENT	MANPOWER	ASSEMBLED	UNASSEMBLED	ASSEMBLY TYPE	LOAD SPACE	CURRENT VELOCITY (mps/fps)			
Corps Ft Brg Co- 213m (700') 5 sets	1 normal bay = 4.6m (15') disassembled per 5-ton brg truck	1 set makes one 4-ft normal raft (4N)	one 4-ft normal raft	5 brg trucks 2 pwr boats (27')	1 platoon	1-1/4	2-1/4	4N 4R	15.7m(15.6') 11.6m(38.3')	50/55 50/55	27 50/55	2.5/8 45/50	3.5/11 40/45
	1 reinforced bay = 3m (10') disassembled per 5-ton brg truck	1 set makes one 5-ft normal raft (5N)	one 5-ft normal raft	6 brg trucks 2 pwr boats (27')	1 platoon	1-1/2 hrs	3 hrs	5N 5R	20.3m(66.6') 15.2m(50')	55/60 60/65	50/55 60/65	45/50 55/60	35/40 45/50
	two 27' BEBs per set	1 set makes one 4-ft reinforced raft (4R) and one 5-ft reinforced raft (5R)	one 6-ft normal raft	7 brg trucks 2 pwr boats (27')	1 platoon	1-3/4	3-3/4 hrs	6R	16.2m(53.3')	65/70	65/70	65/70	45/40
		1 set makes one 6-ft reinforced raft (6R)	1 set makes one 6-ft reinforced raft (6R)										

FOOTNOTE:

¹Classification: wheeled vehicle/tracked vehicle.

²Construction time is increased by 50% at night.

CONSIDERATIONS:

- In assembly type: N = normal; R = reinforced.
- When assembled at a river, a 36 x 39.5m (120' x 130') area is required.
- Draft for — a. raft/bridge = 0.7m(29"); b. BEB = 1.04m (41").
- Roadway: 4m (13.2').
- Assembly crew is required in addition to bridge company personnel.
- Normal site preparation and anchorage time concurrent with assembly.
- Air compressor, crane, 2 BEBs are needed per raft/bridge construction site.
- Anchorages (see FM 5-34).
- BEB = bridge erection boat.

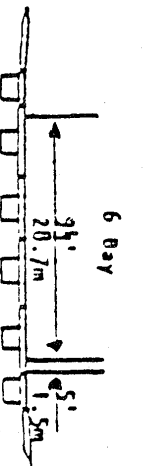
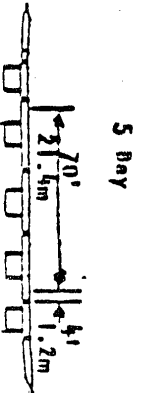
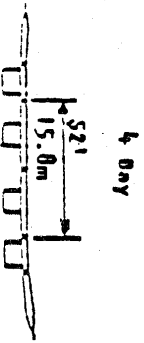
Table 1-5. Characteristics of Mobile Assault Bridge (MAB) Rafts

GENERAL:		ITEM CONTINGENT:							
ALLOCATION PER UNIT	TRANSPORT REQUIREMENTS	ASSEMBLY CHARACTERISTICS			CAPACITY (CLASS) CHARACTERISTICS ¹				
		ITEM	ASSEMBLY TIME	LOAD SPACE	CURRENT	VELOCITY	(NORMAL CROSSING)	(mps/fps)	
Assault Fit Btg Co requires 212m (696) MAB to include 24 Interior Bays and 12 Ramp Bays	Movement size: length = 12.8m (42') height = 3.7m (12') width = 3.7m (12') turn radius = 19.8 (65')	4-bay raft	10 min	15.8m (52')	54/62 (68*)	54/62 (68*)	52/58 (64*)	50/56 (62*)	48/54 (56*)
Div Engr Bn Fit Btg Co requires 149m (488) MAB to include 161 Interior Bays and 8 Ramp Bays	Interior Bay (CL21) Ramp Bay (CL23)	5-bay raft	12 min	21.4m (70')	58/62 (78*)	58/62 (78*)	56/62 (74*)	56/62 (72*)	54/62 (64*)
		6-bay raft	15 min	28.7m (94')	64/62 (108*)	64/62 (108*)	62/62 (108*)	60/62 (100*)	54/62 (90*)

4 Bay

5 Bay

6 Bay

**FOOTNOTE:**

¹Classification: wheeled vehicle/tracked vehicle.

CONSIDERATIONS:

- *Load capacities marked with an asterisk (e.g., 84*) are maximum multiple vehicle loads. Heaviest vehicles are to be positioned first and at extremities of rafts.
- Load space for rafts is illustrated above.
- Rafts and bridges assembled by crew.
- Depth of water required: 1.37m (4.5') to 1.5m (5').
- Roadway is 4.1m (13.5') wide.
- When rafting, all normal operating procedures must be followed.
- Assembly time is increased by 50% at night.
- BEB = bridge erection boat.

Table 1-6. Characteristics of Ribbon Bridge Rafts

GENERAL:

GENERAL:		ITEM-CONTINGENT:											
ALLOCATION PER UNIT	TRANSPORT REQUIREMENTS	ASSEMBLY CHARACTERISTICS				CAPACITY (CLASS) CHARACTERISTICS²							
		ITEM	ASSEMBLY TIME	LOAD SPACE	ASSEMBLY TYPE¹	CURRENT VELOCITY³ (mps/fps)							
						0.9/0.3	1.2/4	1.5/5	1.75/6	2/7	2.5/8	2.7/9	3/10
Corps Ribbon Co requires 213m (700') to include 30 interior bays, 12 Ramp Bays, 14 27' BEBs	Each bay is transported on a modified 5-ton truck ---	3-day raft	8 min	6.7m (22')	L C	45 45	45 45	45 35	40 25	40 15	35 10	30 0	25 0
		4-day raft	12 min	13.4m (44')	L C	70 60	70 60	70 60	60 55⁴	60 40⁴	60 30⁴	55 15⁴	45 0
	BEBs are transported on cradle of 5-ton truck ---	5-day raft	15 min	20.1m (66')	L C	75 75	75 70	75 70	70 70⁴	70 60⁴	70 50⁴	60 25⁴	60 0
Div Ribbon Co requires 20 interior Bays, 8 Ramp Bays, 12 27' BEBs	MLC of loaded truck is 17 tons	6-day raft	20 min	26.8m (88')	L C	W96² T80 W96² T75	96 80 96 70	96 80 96 70	96 70 70⁴ 70	96 70 70⁴ 70	96 70 55⁴ 30	70 70 30⁴ 0	70 70 0 0

FOOTNOTES:

¹L = Longitudinal; C = Conventional

²Classification: 3, 4, and 5-day rafts are wheeled or tracked rating; the 6-day raft is as shown above.

³For longitudinal rafting, current velocity in loading/uploading area must not exceed 1.5mps (5fps).

⁴Use 3 BEBs for propulsion; use 2 BEBs for all others.

CONSIDERATIONS:

- BEB = bridge erection boat.
- Assembled by crew.
- Loaded ribbon raft draft: bay = 0.6m (24"); BEB = 1.04m (41").
- Ramp Bay articulates 1m (3'6").
- Bay launch points: multiple/2 BEBs per site up to 11, 0.75m (30") water depth is required for controlled launch.
- Zero freeboard is common when bridge is loaded.
- Adding pallet to off-loading bridge truck gives secondary cargo mission (5-ton off-route limit).
- Assembly time increased by 50% at night.

- c. Tables 1-7 through 1-12 show characteristics of floating bridges. When roads and approaches are required, their preparation or construction normally is more time-consuming than that involved in bridge construction.

Table 1-7. Characteristics of Aluminum Footbridge

TRANSPORT REQUIREMENTS	CAPABILITIES	ASSEMBLY TIME
One 143m (472') set is transported on two 2½ ton trucks and 2 pole trailers.	Day: 75 foot troops per min Night: 25 foot troops per min	One 143m (472') set takes 1 platoon ¾ hr
CONSIDERATION:		
• Capacity is lowered by 20% in currents 2.5mps (8fps).		

Table 1-8. Characteristics of Light Tactical Bridge

ASSEMBLY TIME	CROSSING TYPE	CAPACITY (CLASS) CHARACTERISTICS¹				
		CURRENT VELOCITY (mps/fps)				
45.7m (150') per hour		1.5/5	2/7	2.5/8	2.75/9	3/10
	Normal	16	13	11	8	5
	Caution	18	15	12	9	6
	Risk	21	17	14	11	8
						3.5/11

FOOTNOTE:

¹Classification: wheeled vehicle/tracked vehicle.

CONSIDERATIONS:

- BEB = bridge erection boat.
- Because much better equipment is available for the bridge, the light tactical raft is normally not used to build a bridge.

Table 1-9. Characteristics of M4T6 Floating Bridges

GENERAL:		ITEM-CONTINGENT:		CAPACITY (GLASS) CHARACTERISTICS ¹					ASSEMBLY CHARACTERISTICS			
ALLOCATION PER UNIT	TRANSPORT REQUIREMENTS	BRIDGE TYPE	FEATURES	1.5/5	2/7	2.5/8	3.5/11		RIVER WIDTH m/(ft)	SUGGESTED UNIT SIZE	NUMBER OF ASSEMBLY SITES	TIME (hrs)
See M4T6 Raft, Table 1-4.	See M4T6 Raft, Table 1-4.	Normal construction	1 set makes 43.2 m (142')	45/55	40/50	35/45	25/30		45.5 m (150')	1 company	2	4
			Number of floats =						61 m (200')	1 company	2	5
			Gap (m) + 2 + 10%						76 m (250')	1 company	2	6
			4.6						91.5 m (300')	2 companies	3	4
			or						106.5 m (350')	2 companies	3	5
			Gap (ft) + 2 + 10%						122 m (400')	2 companies	4	5½
			15						152 m (500')	2 companies	5	6
									183 m (600')	3 companies	6	4
									213 m (700')	3 companies	6	5-7
									244 m (800')	3 companies	6	6-8
									305 m (1000')	3 companies	6	7-10
									366 m (1200')	3 companies	6	8-12
		Reinforced construction	1 set makes 43.2 m (142')	75/75	70/75	65/70	27/30					
			Number of floats =									
			Gap (m) + 10%									
			3									
			or									
			Gap (ft) + 10%									
			10									

FOOTNOTE:

¹Classification: wheeled vehicle/tracked vehicle.

CONSIDERATION:

- Crossing rate up to 200 vehicles/hour with 30m (100') spacing and 16 kmph (10 mph) maximum crossing speed.
- BEB = bridge erection boat.
- For reinforced bridging, add 50% to normal time.
- Increase bridging time by 50% at night.

Table 1-10. Characteristics of Class 60 Float Bridges

GENERAL:		ITEM-CONTINGENT:		CAPACITY (CLASS) CHARACTERISTICS ¹				ASSEMBLY CHARACTERISTICS			
ALLOCATION PER UNIT	TRANSPORT REQUIREMENTS	BRIDGE TYPE	FEATURES	CURRENT VELOCITY (mps/tps)				RIVER WIDTH m/(ft)	SUGGESTED UNIT SIZE	NUMBER OF ASSEMBLY SITES	TIME (hrs)
See Class 60 Raft, Table 1-3.	See Class 60 Raft Table 1-3.	Normal construction	1 set makes 41 m (135')	1.5/5	2/7	2.5/8	3.5/11	0-75m (0'-250')	1 company	2	3
			Number of floats =								
			Gap (m) + 2 + 10%	55/65	45/55	40/50	22/25	76-160m (250'-525')	2 companies	3-5	3-5
			4.6								
			or								
			Gap (ft) + 2 + 10%					160-300m (525'-1000')	2 companies	6	5-8
			15								
		Reinforced construction	1 set makes 41 m (135')	65	65	65	30/35		1 battalion		
			Number of floats =								
			Gap (m) + 10%								
			3								
			or								
			Gap (ft) + 10%								
			10								

FOOTNOTE:¹Classification: wheeled vehicle/tracked vehicle.**CONSIDERATION:**

- Crossing rate up to 200 vehicles/hour with 30m (100') spacing and 16 kmph (10 mph).
 - BEB = bridge erection boat.
 - Increase all bridging times by 50% at night.
 - Bridge classifications assume the use of 15 ft end sections.
- For longer end sections, refer to TM 5-210, Table 7.2.

Table 1-11. Characteristics of Mobile Assault Bridges

ALLOCATIONS PER UNIT	TRANSPORT REQUIREMENTS	FEATURES	ASSEMBLY TIME	CAPACITY (CLASS) CHARACTERISTICS ¹				
See Mobile Assault Bridge Raft, Table 1-5.	See Mobile Assault Bridge Raft, Table 1-5.	Number of Interior Bays = Gap (m) - 20 8 or Gap (ft) - 66 26	200m (600') per hour	0.9/3	1.5/5	2.0/7	2.5/8	2.8/9
				62	62	55	55	55

FOOTNOTE:

¹Classification: wheeled vehicle/tracked vehicle.

CONSIDERATIONS:

- Anchorage by prop/fluke anchor.
- Traffic rate up to 200 vehicles/hour at 16 kmph (10 mph) and 30m (100') spacing.
- Assembly time is increased by 50% at night.

d. Table 1-13 provides the vehicle classification bridge components. In columns 3 through 17, the figure to the left of the diagonal (/) pertains to wheeled vehicles; the figure to the right pertains to tracked capacities for fixed spans constructed from floating

Table 1-13. Load Capacities of Fixed Spans Constructed from Floating Bridge Components

1 Type of Bridge	2 Type of Crossing	Class 60 Bridge														
		3	4	5	6	7	8	9	10	11	12	13	Capacities for specified clear span (ft) ¹			
		24	26	28	30	32	34	36	38	40	50	60				
C1 60, fxd span cap	Normal	100 ² /120 ²	95/120 ²	80/115	65/105	60/95	55/85	50/75	45/65	40/60	30/30	20/20				
	Caution	100/120	100/120 ²	87/120 ²	65/110	70/105	63/90	58/81	53/75	50/68	36/36	25/20				
	Risk	100/120	100/120 ²	100/120 ²	90/120	85/120	75/110	68/100	65/90	60/83	45/50	30/20				

1 Type of Bridge	2 Type of Crossing	M4T6 Bridge														
		3 15.0 ft	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		22 ³ 18	22 ³ 18	22 ³ 16	24 ³ 18	22 ³ 18	22 ³ 16	24 ³ 18	26 ³ 18	20 ³ 16	22 ³ 18	22 ³ 16	24 ³ 18	24 ³ 16	26 ³ 18	26 ³ 16
M4T6 Balk fxd span	Normal	100/125 ²	65/85	70/90	70/90	35/45	40/50	45/55	50/65	25/24	25/24	30/30	30/30	35/40	40/35	40/45
	Caution	100/120 ²	80/100	80/100	85/105	51/70	51/70	55/75	50/82	35/40	40/46	40/46	43/51	43/51	46/56	46/45
	Risk	100/120 ²	90/110	90/110	95/115	57/78	57/78	62/85	67/90	40/47	45/54	45/54	49/60	49/60	53/66	53/66

FOOTNOTES:

¹ Wheeled vehicle/Tracked vehicle.

² Limited by roadway width.

³ Width of bridge - number of balk

Width of roadway - number of balk

e. Tables 1-14, 1-15, and 1-16a through 1-16c provide construction data and vehicle classification capabilities for military fixed bridges constructed from standard bridge components.

Table 1-14. Classes of Bailey Bridge N2 (by Type of Construction and Type of Crossing)

Bridge Length (feet)	Single-single			Double-single			Triple-single			Double-double			Triple-double			Double-triple			Triple-triple		
	N	C	R	N	C	R	N	C	R	N	C	R	N	C	R	N	C	R	N	C	R
30	30/30	42/37	47/42																		
40	24/	36/34	40/38																		
50	24/	33/31	36/35	75/70	83/86	88/84															
60	20/	30/29	33/32	65/65	77/73	85/79															
70	20/	24/	30/30	60/60	68/69	78/75															
80	16/	20/	24/	50/55	60/60	66/64	85/80	95/90	100/90 ¹												
90	12/	16/	19/	40/45	50/60	55/55	65/65	74/75	82/82	80/80	86/90	96/90	90/90 ¹	100/90 ¹	100/90 ¹	70/70	80/90 ¹	90/90 ¹	80/75	100/90 ¹	100/90 ¹
100	8/	12/	14/	30/30	37/39	42/44	50/55	57/67	64/66	65/70	72/76	80/83	75/80	81/90 ¹	91/90 ¹	60/60	77/85	88/90 ¹	70/70	80/90 ¹	80/90 ¹
110				20/	30/32	34/36	35/40	47/49	52/54	45/55	57/61	64/68	55/60	65/72	74/80	70/70	80/90 ¹	88/90 ¹	80/75	100/90 ¹	100/90 ¹
120				16/	23/	27/30	30/35	38/41	43/45	45/55	57/61	64/68	55/60	65/72	74/80	70/70	80/90 ¹	88/90 ¹	80/75	100/90 ¹	100/90 ¹
130				12/	18/	21/	20/	31/33	35/38	35/45	47/50	53/56	45/55	57/62	64/70	70/70	80/90 ¹	88/90 ¹	80/75	100/90 ¹	100/90 ¹
140				8/	14/	17/	16/	24/	29/31	30/35	39/42	44/48	45/55	57/62	64/70	70/70	80/90 ¹	88/90 ¹	80/75	100/90 ¹	100/90 ¹
150							12/	18/	22/	24/	32/35	36/40	35/45	47/51	54/58	60/60	77/85	88/90 ¹	80/75	100/90 ¹	100/90 ¹
160							8/	15/	17/	16/	25/	30/33	45/50	57/64	64/74	45/50	57/64	64/74	80/75	100/90 ¹	100/90 ¹
170							4/	10/	13/	12/	19/	24/	30/35	37/41	45/48	45/50	57/64	64/74	80/75	100/90 ¹	100/90 ¹
180										8/	15/	18/	20/	24/	29/32	35/45	48/53	55/60	70/70	80/90 ¹	100/90 ¹
190													16/	24/	29/32	30/35	39/43	36/51	45/55	59/66	68/77
200													12/	18/	22/	20/	32/36	38/43	35/40	48/52	55/62
210																16/	25/	31/35	24/	38/43	46/51

FOOTNOTES:

¹Limited by roadway width.

CONSIDERATIONS:

- First figure represents wheeled load class; second figure represents tracked load class. Example: 46/51.
- Single classification is designated below class 30.
- Cribbing and wedges are used under the middle of end transoms in bridges of class 40 or over.
- Cribbing and wedges are placed under the midspan of ramps on bridges of class 45 or over.
- Definitions of codes:
 - N - Normal
 - C - Caution
 - R - Risk
- Bridges which have a normal rating over class 70 must be constructed with double transoms.

Table 1-15. Logistic and Construction Data for Bailey Bridge, M2

Item	Panel Bridge, Bailey-type, M2 Effective length of bay, 10 ft						
	Single truss single story (SS)	Double truss single story (DS)	Triple truss single story (TS)	Double truss double story (DD)	Triple truss double story (TD)	Double truss triple story (DT)	Triple truss triple story (TT)
Weight per bay (STON)	2.76	3.41	4.01	4.66	5.88	6.46	8.29
Cubage per bay (MTON)	9.00	11.00	13.00	14.00	18.00	20.00	26.00
Type of issue (CL)	II	II	II	II	II	II	II
Transportation per bay ¹	3.00/1.0	2.01/0.70	2.00/0.70	2.11/0.70	2.50/0.65	2.51/0.63	3.20/0.68
Man-hours to erect 1 bay	28.00	37.00	49.00	63.00	98.00	161.00	281.00

FOOTNOTE:

¹Figures are average requirements for 5-ton dump trucks with 2 1/2-ton pole trailers for spans with minimum MLC of 30.
See TM 5-277 for transportation requirements of specific spans and assemblies.

Table 1-16a. Data for Medium Girder Bridge¹

LABOR/TIME	BRIDGE SPAN					
	Single Story (SS)			Double Story Single Span (DS)		
	5 bay 9.8m	8 bay 15.2m	12 bay 22.6m	12 bay 31.4m	18 bay 42.4m	22 bay 49.8m
Working party (OIC/NCOIC & Workers)	MLC 60	MLC 30	MLC 16	MLC 60	MLC 30	MLC 16
Time by day (hours) ²	1 + 8	1 + 16	1 + 16	1 + 24	1 + 24	1 + 24
Time by night (hours) ²	1/2	3/4	1	1 1/2	1 3/4	2
	3/4	1	1 1/4	2	2 1/4	3

FOOTNOTES:

¹Working parties and building times on good sites (firm ground, dry conditions).

²All timings exclusive of work on approaches.

Table 1-16b. Single Story, Medium Girder Bridge (26' to 74")

Angle of Repose Gap m(ft)	No. of Bays	Length of Bridge m(ft)	MLC	R m(ft)
3.7 - 6.1 (12' - 20')	4	7.9 (26')	60	5.8 (19')
5.6 - 8.0 (18' - 26')	5	9.8 (32')	60	6.7 (22')
7.4 - 9.8 (24' - 32')	6	11.6 (38')	40	7.6 (25')
9.2 - 11.6 (30' - 38')	7	13.4 (44')	30	9.5 (31')
11.0 - 13.6 (36' - 44')	8	15.2 (50')	30	11.3 (37')
12.9 - 15.3 (42' - 50')	9	17.1 (56')	24	10.4 (34')
14.7 - 17.1 (48' - 56')	10	18.9 (62')	20	12.2 (40')
16.5 - 18.9 (54' - 62')	11	20.7 (68')	16	12.2 (40')
18.4 - 20.8 (60' - 68')	12	22.6 (74')	16	14.0 (46')

Table 1-16c. Double Story, Medium Girder Bridges (37' to 163')

Angle of Repose Gap m(ft)	2 End + Bays	Length of Bridge		R m(ft)
		m(ft)	MLC	
6.7 - 9.0 (22' - 29.5')	1	11.3 (37')	60	10.0 (33')
8.5 - 10.8 (28' - 35.5')	2	13.1 (43')	60	11.9 (39')
10.3 - 12.6 (34' - 41.5')	3	14.9 (49')	60	12.2 (40')
12.2 - 14.5 (40' - 47.5')	4	16.8 (55')	60	13.1 (43')
14.0 - 16.3 (46' - 53.5')	5	18.6 (61')	60	14.9 (49')
15.8 - 18.1 (52' - 59.5')	6	20.4 (67')	60	14.9 (49')
17.6 - 19.9 (58' - 65.5')	7	22.3 (73')	60	15.8 (52')
19.5 - 21.8 (64' - 71.5')	8	24.1 (79')	60	16.8 (55')
21.3 - 23.6 (70' - 77.5')	9	25.9 (85')	60	17.7 (58')
23.1 - 25.4 (76' - 83.5')	10	27.7 (91')	60	19.5 (64')
25.0 - 27.3 (82' - 87.5')	11	29.6 (97')	60	20.4 (67')
26.8 - 29.1 (85' - 95.5')	12	31.4 (103')	60	21.6 (71')
28.6 - 30.9 (94 - 101)	13	33.2 (109)	50	27.4 (90')
30.5 - 32.8 (100 - 108)	14	35.1 (115)	50	28.7 (94')
32.3 - 34.6 (106 - 114)	15	36.9 (121)	40	28.7 (94')
34.1 - 36.4 (112 - 119)	16	38.7 (127)	40	29.6 (97')
35.9 - 38.2 (118 - 125)	17	40.5 (133)	30	29.3 (96')
37.8 - 40.1 (124 - 131)	18	42.4 (138)	30	29.3 (96')
39.6 - 41.9 (130 - 137)	19	44.2 (145)	24	34.8 (114')
41.4 - 43.7 (136 - 143)	20	46.0 (151)	24	38.4 (126')
43.3 - 45.6 (142 - 150)	21	47.9 (157)	20	38.4 (126')
45.1 - 47.4 (148 - 156)	22	49.7 (163)	16	40.1 (132')

CONSIDERATIONS:

- Definitions of abbreviations for medium girder bridge:

AR: Angle of Repose
DS: Double Story
R: Maximum distance to rear of bridge during construction (back space)
SS: Single Story

1.4 MINEFIELD BREACHING AND CLEARING.

and materiel requirements for clearing or breaching minefields.

Table 1-17 may be used for initial estimates of time

Table 1-17. Minefield Average Breaching/Clearing Time and Materiel Requirements

Method ¹	Width of Cleared Lane (in meters)	Man-hours Required Per 100 Meters	Comments
<u>Manual</u>			
Location by probing	1 (footpath)	16-22	Normally used in clearing operations.
Removal by rope or explosive	1 (footpath)	38-44	
Location by detector, assisted by probing	8 (one-way vehicle lane)	27-33	
Removal by rope or explosives	8	220-247	
<u>Mechanical</u>			
Track width mine clearing roller	4.0(1.83) ²	0.5 to 0.75 min ²	15 min installation time required
<u>Explosive</u>			
Demolition Kit, M173	8	0.25/set ⁵	2 kits or other countermine devices required ⁴
Demolition snake M157 (Diamond LII)	3.5 - 4.5	2	Set is 90m long; 6 to 8 hrs preassembly required
Bangalore torpedo M-1 ⁶	0.6 (footpath)	3.5-4.5	
M58A1 Mine Clearing Line Charge ⁷	8	0.25	1 kit required per 100m depth; light forces only

FOOTNOTES:

¹All estimates based on average conditions of visibility and moderate enemy activity and normal US countermeasures (that is, screening of enemy observation and counterbattery fires against hostile artillery or other weapons covering the field).

²Based on host vehicle speed of 5-8 mph. Actual tests resulted in M60 host vehicle speed of 6.4 mph (average) and M-1 host vehicle speed of 7.5 mph (average).

³"Dog-bone" chain assembly clears 72" (1.83m) area between the rollers of tilt-rod activated mines only. Each roller has a width of 44" and is designed to withstand two detonations of land mines containing no more than 30 pounds of explosives.

⁴Each kit clears a path 83m long.

⁵Figure reflects final preparation time. Kit is towed/carried to a preparation area (near the minefield) where the unit is rigged for remote firing from inside the towing vehicle. Rigging takes 1 to 2 hours. Kit is then towed to the edge of the minefield for employment. Two kits may be towed in tandem.

⁶Effective against pressure-sensitive AP mines only.

⁷Each kit requires 30 to 60 minutes preparation time prior to employment of the device at the minefield edge.

1.5 TRAFFICABILITY OF FORDS. Data in Table 1-18 are based on a moderate current (not more than 1.5 meters per second), hard bottom, and hard, dry

approaches. Suitable waterproofing of vehicles will increase fording depths.

Table 1-18. Trafficability of Fords

Type of Traffic	Shallow	Minimum	Maximum Percent of Slope for Approaches ¹
	Fordable Depth	Width	
Foot	1m(39")	1m(39") (single file) 2m(79") (column of 2s)	100
Trucks and truck-drawn artillery	.75m(30")	3.6m(12')	33
Light tank	1m(39")	4.2m(14')	50
Medium tanks ²	1.05m(42")	4.2m(14')	50

FOOTNOTES:

¹Based on hard, dry surface.

²Depths up to 4.3 meters can be negotiated with deep water fording kit.

1-6. LOAD-BEARING CAPACITY OF ICE. The strength of ice varies with its structure (the purity of the water from which it forms, the cycle of forma-

tion (freezing, thawing, and refreezing), the temperature, the snow cover, and the water currents). Tables 1-19 and 1-20 are based on the characteristics of good-

quality waterborne ice. They may be used as guides until actual load tests are made to determine the load-bearing capacity for the ice.

Table 1-19. Ice Load-Carrying Capacity for Sleds

Ice Thickness cm(in)	Gross sled weight tons
15.0 (6.0)	1
17.5 (7.0)	2
23.0 (9.0)	5
33.0 (13.0)	10
40.0 (16.0)	15
46.0 (18.0)	20

Table 1-20. Ice Load-Carrying Capacity for Personnel and Equipment

Type of Load	Gross Weight tons	Minimum Ice Thickness cm (in)	Minimum Distance Between Loads m (yd)
	tons	cm (in)	m (yd)
Soldier on skis or snowshoes	0.1	3.0 (1.2)	5.0 (5.5)
Soldier on foot	0.1	5.0 (2.0)	5.0 (5.5)
Infantry (column of 2s)	Varies	7.6 (3.0)	7.3 (8.0)
Infantry (column of 4s)	Varies	10.0 (4.0)	10.0 (11.0)
Wheeled-vehicle loads up to	3.5	23.0 (9.0)	15.0 (16.5)
Wheeled-vehicle loads up to	6.0	30.0 (12.0)	20.0 (22.0)
Wheeled-vehicle loads up to	10.0	40.0 (16.0)	25.6 (28.0)
Wheeled-vehicle loads up to	15.0	61.0 (24.0)	30.0 (33.0)
Wheeled-vehicle loads up to	3.5	20.0 (8.0)	15.0 (16.5)
Tracked-vehicle loads up to	10.0	30.0 (12.0)	20.0 (22.0)
Tracked-vehicle loads up to	12.5	40.0 (16.0)	25.6 (28.0)
Tracked-vehicle loads up to	25.0	61.0 (24.0)	40.0 (44.0)
Tracked-vehicle loads up to	45.0	71.0 (28.0)	50.0 (55.0)
Tracked-vehicle loads up to	60.0	81.0 (32.0)	60.0 (66.0)

CONSIDERATIONS:

- Ice must be almost pure (not polluted water.)
- Ice must not have been refrozen (partially thawed and frozen again).
- Ice must be relatively free of air bubbles.

SECTION III. COUNTERMOBILITY PLANNING DATA

1-7. TASKS. Countermobility support includes

those tasks which deny the enemy the ability to place units, equipment, and supplies wherever it desires on the battlefield. Engineer support is required when an organization does not possess the proper equipment or expertise to conduct countermobility tasks or when

the task is too great for organic means. The data in this section provide the planner with estimates of time, materiel, and manpower requirements for countermobility tasks normally associated with engineer support.

1-8. BARBED WIRE OBSTACLES.

a. Table 1-21 lists the physical characteristics of materials used in barbed wire and tape entanglements.

Table 1-21. Wire Entanglement Materiel Requirements

Materiel	Approx. Weight (kg)	Approx. Length (m)	No. Carried By One Man	Approx. Weight of Man-load × 3
Barbed wire reel	41.5	400	1/2	21
Bobbin	3.5-4.0	30	4-6	14.5-24.5
Barbed tape dispenser	0.77	0.45	20	15.5
Barbed tape carrying case	14.5	300	1	14.5
Standard barbed tape concertina	14	15.2	1	14
Standard barbed wire concertina	25.4	15.2	1	25
General Purpose Barbed tape				
Obstacle package	117.9	140	1/4	29.47
unit	15.8	20	1	15.8
Screw pickets:				
long	4	1.6	4	16.3
medium	2.7	0.81	6	16.3
short	1.8	0.53	8	14.5
U-shaped pickets:				
extra long	7.25	2.4	3-4	21.8-29.0
long	4.5	1.5	4	18.1
medium	2.7	0.81	6	16.3
short	1.8	0.61	8	14.5
Wooden pickets:				
extra long	7.7-10.3	2.13	2	15.4-20.8
long	5.4-7.25		3	16.3-21.7
short	1.4-2.7		8	11.0-21.7

b. Table 1-22 lists the materiel and labor requirements for constructing 300-meter sections of various types of barbed wire obstacles. This table and the following formulas may be used to estimate the materiel, manpower, and transportation requirements for barbed wire obstacles:

(1) When estimating materiel and labor requirements for wire entanglements deployed along the forward edge of the battle area (FEBA), use the following formulas to determine the effective length of the entanglement:

(a) Tactical wire: Front × 1.25 × number of belts.

(b) Protective wire: Front × 5 × number of belts.

(c) Supplementary wire:

— Forward of FEBBA: Front $\times 1.25 \times$ number of belts.

— Rear of FEBBA: Unit depth $\times 2.5 \times$ number of belts.

(2) When estimating materiel and labor requirements for wire entanglements deployed around a perimeter defensive position, use the following formulas to determine the effective length of the entanglement:

(a) Tactical wire: Mean perimeter of the wire $\times 1.25 \times$ number of belts.

(b) Protective wire: Mean perimeter of the wire $\times 1.10 \times$ number of belts.

(c) Supplementary wire: Mean perimeter of the wire $\times 1.25 \times$ number of belts.

(3) After determining the effective length of the entanglement by using formula b(1) or b(2) above, divide the effective length by 300 meters to calculate the number of 300-meter sections you would effectively construct. Carry the number out two decimal places and then round-off to the nearest tenth.

(a) Multiply the number of 300-meter sections times the values in Table 1-22 according to the type of wire that will be constructed. Pay careful attention to the notes for this table. You may have more than one choice of values and various factors may be required to adjust the table values.

(b) The number of 300-meter sections is multiplied times the appropriate value in each column of

Table 1-22, except for the column entitled Kilograms of Materials per Linear Meter of Entanglement. The value in this column is the average weight per meter and it should be multiplied times the total effective length of the entanglement to determine the total weight of the required materials. Divide the total weight by the vehicle capacity to determine the number of trucks or truckloads required to haul the materiel. The second footnote for Table 1-22 states that the vehicle capacity should be 2268 kilograms which equates to 2½ tons. Use of this weight limit will enable you to make an accurate estimate of the number of trucks required, whether 2½-ton cargo truck or 5-ton dump truck are used. The 5-ton dump truck has less than ½ the volume capacity of the 2½ ton cargo truck, and the bulk or volume of wire entanglement materials will limit a 5-ton dump truckload to approximately 2½ tons.

Table 1-22. Materiel and Labor Requirements For 300-Meter Sections of Various Wire Entanglements

Type of Entanglement	Pickets			No. of Concertinas	Staples	General Purpose		Manhours to Erect 300m of Entanglement ³	Kgs of Materials Per Linear Meter Entanglement ²
	Long	Med	Short			Barbed Tape	Obstacle Units		
Double apron, 4- and 2-pace	100	—	200	—	—	—	—	59	4.6 (3.5) ⁵
Double apron, 6- and 3-pace	66	—	132	—	—	—	—	49	3.6 (2.6) ⁵
High wire (less guy wires)	198	—	—	—	—	—	—	79	5.3 (4.0) ⁵
Low wire, 4- and 2-pace	—	100	200	—	—	—	—	49	3.6 (2.8) ⁵
4-strand cattle fence	100	—	2	—	—	—	—	20	2.2 (1.8) ⁵
Triple standard concertina	160	—	4	—	317	—	—	30	8.2 (7.3) ⁵
General purpose barbed taped obstacle	—	—	—	—	—	—	—	1	2.7

FOOTNOTES:

¹Lower number of reels applies when screw pickets are used; higher number when U-shaped pickets are used. Add the difference between the two to the higher number when wood pickets are used.

²Average weight when any issue metal pickets are used. Estimate truckloads based on vehicle capacity of 2268 kgs.

³Manhours are based on the use of screw pickets. Multiply these figures by 0.67 when experienced troops are being used and by 1.5 for night work. With the exception of triple standard concertina and general purpose barbed tape obstacle, multiply by 1.2 when using driving pickets.

⁴Number of cases of barbed tape required if barbed tape is used in place of barbed wire.

⁵Kegs of material required per linear meter of entanglement if barbed tape is used in place of barbed wire and barbed tape concertina is used in place of standard concertina.

⁶Based on vehicle emplaced obstacle installed in triple belts.

1-9. MINEFIELDS.

a. For detailed information on mine warfare, see FM 5-100, FM 5-102, and FM 20-32.

b. Table 1-23 provides data on conventional landmines.

Table 1-23. Conventional Landmines

Systems	LIN	DDDIC	Wt Per Mine		No. Mines Per Box	Wt Per Box		Box Cubage (cu ft)	No. Boxes Pallet	Pallet Load	
			(lbs)			(lbs)				Cubage (cu ft)	Wt Per Pallet (lbs)
M15 AT	M47863	K180	30		1	49		1.2	36	56.7	1,864
M19 AT	M48000	K250	28		2	72		1.6	36	42.2	2,692
M21 AT	M48137	K181	17		4	91		4.1	12	53.3	1,192
M14 AP	M45945	K121	0.2		90	44		1.9	20	41.7	980
M16 AP	M46082	K092	8		4	45		0.8	60	53.3	2,700
M18A1 AP	M46493	K143	3.5		6	53		1.7	12	43.1	736
M24 AV/AT (off-route)	M48205	K182	18		2	70		3.2	12	45.7	840

c. TRADOC Pam 525-19 states that “chemical mines are not used since the systems provide similar results with better control.”

d. Table 1-24 provides data on scatterable mines. Scatterable mines are those mines which are designed to self-destruct after a set period of time.

Table 1-24. Scatterable Mines

Systems	LIN	DODIC	Wt Per Mine	No. Mines	Wt Per Box	Box Cubage	No. Boxes	Pallet Load	Wt Per Pallet
			(lbs)	Per Box	(lbs)	(cu ft)	Pallet	Cubage (cu ft)	(lbs)
RAAMS M718/741 (long/short) (M483 RD) ¹	—	D503/D509	3.8	9 ¹	103	—	8	9.7	882
ADAM M692/731 (long/short) (M483 RD) ¹	—	D501	1.0	36 ¹	103	—	8	9.7	882
		D502							
M75 AT (GEMS)	M47017	K151	3.8	40	232	3.5	6	32.5	1,573
M74 AP (GEMSS)	M47794	K184	3.2	40	132	4.2	6	32.2	1,360
M56 AV/AT ²	M48996	Z129	5.6	80	640	9.6	—	—	—

FOOTNOTES:

1155mm projectile

²production discontinued

e. Table 1-25 may be used for initial estimates of materiel, transportation, and labor requirements

to emplace various minefields. No safety factor for loss or damage to mines and fuzes in transport is included in the data. Normally, there is a 10 percent allowance for such loss.

Table 1-25. Manpower, Materiel, and Transportation Requirements for Emplacement of Minefields

ITEM	Units Per 1,000 Meters of Minefield					
	Protective ²		Tactical		GEMSS	
	Standard Pattern					
	1-2-2 ³	1-4-8 ³	.0017 ⁴	.005 ⁴	.0083 ⁴	.0167 ⁴
Manpower ⁴						
Manhours	370.0	918.0	2,403.6	9.3	15	21.3
Platoon hours (30 man)	12.3	30.1	80.2	—	—	—
Company-days (3 plt, 10 hr per day)	0.4	1.0	2.7	—	—	—
Tonnages:						
Short tons						
Measurement tons (40 cu ft)	10.83	44.22	110.95	1.2	3.5	5.8
Transportation Required ¹	16.43	48.49	126.14	1.2	3.6	6.0
2½ ton (440 cu ft)						
M35 Series	4.4	17.7	44.4	0.5	1.4	2.3
LN x 40009						
2½ ton dump (250 cu ft)						
LN x 43297	4.4	17.7	44.4	0.5	1.4	2.3
						4.6

5 ton dump (300 cu ft)	2.2	8.9	22.2	0.25	0.7	1.2	2.3
LIN x 43708							
5 ton cargo (480 cu ft) M54 series	2.2	8.9	22.2	0.25	0.7	1.2	2.3
LIN x 40831							
5 ton stake (600 cu ft) Brg	2.2	8.9	22.2	0.25	0.7	1.2	2.3
LIN x 44403							
20 ton dump (750 cu ft) M917 series	.887	2.67	6.77	.067	0.127	.37	0.657
LIN x 44403							
5 ton transporter, Brg Fit w/pallet, (LIN N51500) 224" x 118"	2.2	8.9	22.2	0.25	0.7	1.2	2.3
LIN x 23277							
Trailer, 4ton Bolster w/pallet, (NSN 5420-01-081-3229) 14' x 6.9"	2.7	11	27.7	0.3	0.9	1.5	2.9
Antitank mines:							
Metallic (M15)	500.0	1,224.0	3,424.0	—	—	—	—
Nonmetallic (M19)	(125.0)*	(979.0)*	(2,739.0)*	—	—	—	—
Mine, shaped-charge (M21)	(375.0)	(245.0)	(685.0)	—	—	—	—
Mine AT M75	—	—	—	200	900	1500	3000
Antipersonnel mines:							
Blast (M14 or M25)	1,000.0	2,447.0	9,047.0				
Fragmentation (M16A1)	—	2,447.0	4,647.0				
Directional (M18A1)	1,000.0	—	—	60	180	300	600
Mine, AP M74	—	—	—				
Firing devices:							
Trip flares (M49)	—	123.0*	1,370.0 ¹⁰		—	—	—
Barbed wire (400 yd reel) ¹¹	100.0	100.0	100.0	7.0	7.0	7.0	7.0
Pickets, long	—	9.3	11.6				
	—	124.0	150.0	95	95	96	96

FOOTNOTES:

- ¹Due to the nature of point, interdiction, and phoney minefields, it is not considered possible to estimate the manpower, materiel, and transportation requirements for these types of minefields. These requirements will be decided for each situation by the commander.
- ²No irregular outer edge (IOE) exists in protective field. Protective minefield is based on minimum of 6 meters between AT mines and 5 meters between M18A1 mines in rows and is also based on a minimum of 9 rows in the minefield.
- ³Assumed IOE cluster composition for tactical minefield is 1-2-2.
- ⁴Based on 3 row, 60m wide strips, 5.1 mix AT to AP (density in mines per square meter and mines per meter of front).
- ⁵Based on laying rate of 4 antitank, 8 antipersonnel fragmentation, or 16 antipersonnel blast mines per manhour (conventional mines only).
- ⁶In most cases, weight rather than cubage governs transportation requirements for mine haul.
- ⁷Cubage governs.
- ⁸Reduce number of AT mines in tactical minefield 50 percent when using M21 mines in place of M15 mines.
- ⁹Five percent of M15 and M19 boobytrapped with two devices.
- ¹⁰Twenty percent of M15 and M19 boobytrapped with two devices.
- ¹¹Sides and rear of minefield only.

1-10. DEMOLITION OBSTACLES.

a. Table 1-26a may be used for initial estimates of materiel and manpower requirements for the more

common types of demolition tasks required in creating obstacles. See FM 101-10-3 for classified data and FM 5-25 for unclassified details on demolitions.

Table 1-26a. Materiel and Manpower Requirements for Demolition of Individual Targets

Targets	C-4(lb)	TNT(lb)	Cratering charge (40-lb)	Shaped charge (40-lb)	Thermite grenades (each)	Squad hours (10 men)
Highways:						
Major bridge (more than 400 ft)	600	—	20	—	—	3.0
Minor bridge (up to 400 ft)	400	—	15	—	—	2.0
Tunnel	—	12,000	—	—	—	5.0
Road crater (deliberate 25 ft road)	—	500	10	6-15	—	1.25
Railroads:						
Major bridge (more than 400 ft):						
Single track	—	3,000	—	—	—	5.0
Double track	—	4,500	—	—	—	5.0
Minor bridge (up to 400 ft):						
Single track	—	2,000	—	—	—	4.0
Double track	—	3,000	—	—	—	4.0
Tunnel	—	12,000	—	—	—	5.0
Terminal facilities	550	30	—	—	43	3.2
Rolling stock (locomotive and 30 cars)	6	—	—	—	125	3.2
Airfields:						
Runway (per 1,000 ft)	—	5,500	—	25	—	8.0
Fuel storage (per tank):						
Below ground	—	400	—	—	1	1.0
Above ground	—	—	—	1	1	0.2
Radar/radio apparatus	—	30	—	—	10	0.4
POL facilities:						
Storage and handling	4	—	.15	—	10	1.2
Refining facilities	80	—	—	—	15	0.8
Distribution	10	—	—	—	2	0.2
Electric power denial:						
Generator	—	150	—	—	10	1.0
Transformer station	—	100	—	—	25	1.0
Telecommunication Denial:						
Telegraph exchange	10	—	—	—	1	0.1
Telephone exchange	20	—	—	—	2	0.2
Repeater/radio station	40	—	—	—	2	0.2
Radio station	40	—	—	—	—	0.2
Radio link terminal	40	—	—	—	—	0.2

Waterway denial:

Lock	110	—	—	—	—	0.6
Weir	—	1,000	—	—	—	2.0
Levee wall, aqueduct, or siphon	—	—	15	—	—	2.0
Dam (navigation)	500	—	—	—	—	2.5
Inland port facilities	20	20	—	—	—	0.4

CONSIDERATION:

- Where data in columns 2 to 6 appear in more than one column for a given target, all of the material shown are required for demolition of that target.

b. Efforts continue in the development of an economical slurry explosive with a long shelf-life which can be quickly emplaced to produce steep-sided excavations. The following general guidelines have been developed when using conventional explosives in constructing antitank ditches:

(1) Deliberate ditches. Number of holes required on five-foot centers can be determined by the formula

$$N = \frac{L - 16}{5} + 1$$

where L equals the length of the

ditch in feet. End holes are 7 feet deep and the remaining holes are alternately 5 feet and 7 feet deep. Seven foot holes are packed with 80 pounds of explosives; 5 foot holes with 40 pounds. No two adjacent holes may

be 5 feet deep.

(2) Hasty ditches. Calculations for the number of holes on 5 foot centers is the same as for deliberate ditches. All holes are equal in depth. If the threat is known, the following guides apply:

(a) Heavy tank threat (five-foot deep holes packed with 50 pounds of explosives each).

(b) Medium and small armor threat (four-foot deep holes packed with 40 pounds of explosives).

c. Table 1-26b may be used for initial estimates of manpower and equipment requirements for construction of antitank ditches. Data are representative of

triangular or rectangular ditches measuring 1.2 meters deep and 3.3 meters wide. Ditches of this depth are considered expedient in nature. When the situation permits, ditches should be dug 1.5 to 1.8 meters deep. Rectangular ditches effectively impose delays in both directions (assuming armored vehicle launched bridges are not readily available). Triangular ditches are from two to four times faster to cross by friendly armor when counterattacking. Significant reduction of basic production rates will occur if team crews are inexperienced, if reduced visibility exists, if tactical conditions do not permit uninterrupted work, if protective clothing must be worn, or if required equipment has significant maintenance deficiencies. FM 5-102 contains more detailed planning data.

Table 1-26b. Mechanical Antitank Ditching

Unit	TOE	Dozer Teams	Scraper Teams	Linear Meters of Ditch per Hour		
				In Rock ^a	In Clay ^b	In Sand ^c
Engr Cbt Bn (Corps)	5-35	10 ¹		210-660	500-800	1000
Engr Cbt Bn (Mech, Corps)	5-45	14 ²		290-920	700-1120	1400
Engr Cbt Bn (Hv)	5-115	8 ³	3 ⁴	170-530	640-1010	1100
Engr Cbt Bn (Armor/Mech Div)	5-145H	12 ¹		250-790	600-960	1200
Engr Cbt Bn (Armor/Mech Div)	5-145I	14 ⁵		290-920 ^a	700-1120 ^a	1400 ^a

FOOTNOTES:

- ¹Each team consists of one loader and one dozer.
- ²Twelve teams consist of one loader and one dozer or M-9 ACE; 2 teams consist of two dozers or ACEs.
- ³Five dozer teams consist of one loader and one dozer; 3 dozer teams consist of two dozers.
- ⁴Scraper teams consist of 3 tractor/scraper combinations with additional pusher tractor.
- ⁵Twelve teams consist of one loader and one ACE; 2 teams consist of two ACEs.
- ^aBased on production rate of 21 to 66 MPH for dozer team; scraper team has a zero production rate in rock. Figures can be significantly increased by preblasting followed by ripping.
- ^bBased on production rate of 50 to 80 MPH for dozer team; 80 to 125 MPH for scraper team.
- ^cBased on production rate of 100 MPH for both dozer and scraper teams.
- ^dFigures assume digging capabilities of dozer and M-9 ACE are approximately equal.

SECTION IV. SURVIVABILITY PLANNING DATA

1-11. TASKS. Survivability support includes those tasks which deny the enemy the full potential of his weapons systems directed against friendly organizations and facilities. In general, individual units have primary responsibility for the development, positioning, and initial construction of structures that enhance survivability. Engineer support is necessary

when an organization does not possess the proper equipment or expertise to conduct survivability tasks, or when the task is too great for organic means. The data furnished in this section provide the planner with estimates of time, material, and manpower requirements for survivability tasks normally associated with engineer support.

1-12. FIELD FORTIFICATIONS.

a. The construction effort data given in Tables 1-27 through 1-32 are for daylight conditions. For work at night, increase labor requirements by 50 percent. For details, see FM 5-15, and TM 5-855-1. Table 1-27 lists the characteristics of typical personnel and individual weapon and crew-served weapon emplacements.

Table 1-27. Characteristics of Individual and Crew-Served Weapons Fighting Positions

Type of Position	Estimated Construction Time in Manhours	Equipment Requirements	Small Arms Fire	Conventional Weapons Blast and Fragmentation from Near-Miss Airburst Contact or Delay Rounds ²	Protection Provided ¹	Direct Hit on Overhead Cover (Contact Burst) ²	Nuclear Weapons ³	Comments
Improved shell crater	0.2	Hand tools	7.62 mm	Better than in open - no overhead protection		None	Fair	
Skirmishers trench	0.5	Hand tools	7.62 mm	Better than in open - no overhead protection		None	Fair	
Prone position	1.0	Hand tools	7.62 mm	Better than in open - no overhead protection		None	Fair	Provides all-around cover
One-man fighting position	3.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft - no overhead protection		None	Fair	
Two-man fighting position	6.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft - no overhead protection		None	Fair	
One-man fighting position with 18-in overhead cover	8.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft		None	Good	Additional cover will provide protection from mortar contact burst
Two-man fighting position with 18 in overhead cover	11.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft		None	Good	Additional cover will provide protection from small mortar contact burst
LAW position	3.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft - no overhead protection		None	Fair	
DRAGON position	4.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft - no overhead protection		None	Fair	
Dismounted TOW	11.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft - no overhead protection		None	Fair	
90 mm RCLR position	6.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft - no overhead protection		None	Fair	
Machine gun position	7.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft - no overhead protection		None	Fair	
Machine gun position with 18-in. overhead cover	12.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft		None	Good	

Mortar position	14.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft - no overhead protection	None	Fair	
Wood or steel frame fighting position with 30-in overhead cover	32.0	Hand tools	12.7 mm	Medium artillery no closer than 30 ft	Small mortar	Good	
Frame/fabric fighting position with 18-in overhead cover	16.0	Hand tools	12.7 mm	Medium artillery no closer than 15 ft	Small mortar	Good	
Corrugated metal fighting bunker with 30-in overhead cover	48.0	Hand tools; backhoe	7.62 mm	Medium artillery no closer than 10 ft	Small mortar	Good	
Plywood perimeter bunker	48.0	Hand tools; backhoe	7.62 mm	Limited protection - no overhead protection	None	Poor	Construction time assumes precast logs
Concrete log bunker with 30-in overhead	42.0	Hand tools; backhoe	7.62 mm	Medium artillery no closer than 10 ft	Small mortar	Good	Protection provided includes one layer of sandbags around walls
Precast concrete slab bunker with 30 in overhead cover	30.0	Hand tools; backhoe; crane	7.62 mm	Medium artillery no closer than 10 ft	Small mortar	Good	Construction time assumes precast panels
Concrete arch bunker with 30-in overhead	38.0	Hand tools; backhoe	7.62 mm	Medium artillery no closer than 10 ft	Small mortar	Good	Protection provided includes one layer of sandbags around walls
							Construction time assumes precast concrete sections. Protection provided includes one layer of sandbags around walls

FOOTNOTES:

- ¹Chemical protection is assumed to be provided by individual protective masks and clothing.
- ²Round sizes are identified as follows: Mortar — small = 82 mm or less
medium = 120 mm or less
Artillery — small = 105 mm or less
medium = 152 mm or less
- ³Nuclear protection ratings are given as Poor, Fair, Good, Very Good, and Excellent. For additional details on radiation, thermal, and blast effects, refer to Chapter 3, section II, FM 5-103.

CONSIDERATION:

- Using axes and chainsaws, 4 manhours' labor is required for clearing 100 square yards of brush and a few trees up to 12 inches in diameter; for clearing brush only, 2 manhours labor are required.

b. Table 1-28 lists characteristics of representative vehicle emplacements with protection afforded.

Table 1-28. Characteristics of Major Weapons Systems Emplacements

Type of Position	Estimated Construction Time	Equipment Requirements	Small Arms Fire	Protection Provided ²				Comments
				Blast and Fragmentation from Near-Miss Airburst	Direct Hit on Overhead Cover (Contact Burst) ³	Infantry Antitank Weapons	Nuclear Weapons ⁴	
Hasty vehicle emplacement ¹	0.5	Available excavation equipment	12.7 mm	Medium artillery no closer than 5 ft - no overhead protection	NA	120 mm at base	Poor	Frontal protection only
Deliberate vehicle emplacement ¹	1.5	Available excavation equipment	12.7 mm	Medium artillery no closer than 5 ft - no overhead protection	NA	120 mm at base	Fair	No protection for rear of emplacement
Deep cut vehicle emplacement ¹	3.0	Available excavation equipment	Cannot be engaged	Medium artillery no closer than 5 ft - no overhead protection	NA	Cannot be engaged	Fair	
Covered shelter for wheeled vehicle with 18 in overhead cover	34.0	Hand tools backhoe	Cannot be engaged	Medium artillery no closer than 5 ft	Small mortar	Cannot be engaged	Good	

FOOTNOTES:

¹For comparative purposes, information provided in this table is for the M113 vehicle. For other vehicles, refer to Tables 6-29 and 6-30.

²Chemical protection is assumed to be provided by individual protective masks and clothing.

³Round sizes are identified as follows: small = 82 mm or less. Artillery — small = 105 mm or less. medium = 120 mm or less. medium = 152 mm or less.

⁴Nuclear protection ratings are given as Poor, Fair, Good, Very Good, and Excellent. For additional details on radiation, thermal, and blast effects, refer to FM 5-103.

c. Table 1-29 lists emplacement dimensions required for specific fighting vehicles.

Table 1-29. Dimensions of Deliberate Emplacements for Fighting Vehicles

Vehicle Type	Pit Dimensions (ft) ¹			Minimum Parapet Thickness at Base (ft)	Equipment (D7 Dozer) Hours ³	Comments
	Length	Width	Depth ²			
M113 series carrier	22	14	6	8	0.7	Includes flamethrower (M132); Vulcan (M163); cargo carrier (M548); recovery vehicle (M806); and TOW vehicle (M901)
M577 command post vehicle	22	14	9	8	1.0	
M106 and M125 mortar carrier	22	16	7	8	0.9	
M2 and M3 fighting vehicle	26	16	7	8	1.0	
M1 main battle tank	32	18	6	8	1.3	
M60 series main battle tank	30	18	6	8	1.2	
M48 series battle tank	30	18	6	8	1.2	

Chaparral and self-propelled Hawk	26	15	4	8	0.6	
DIVAD	36	18	5	8	1.2	
General support rocket launcher	27	17	3	8	0.5	
155-mm self-propelled howitzer (M109)	107	18	5	8	3.6	Length accommodates ammunition supply vehicle
175-mm self-propelled gun (M107)	105	16	5	8	3.1	Length accommodates ammunition supply vehicle
8-in self-propelled howitzer (M55)	113	19	6	8	4.8	Length accommodates ammunition supply vehicle
8-in self-propelled howitzer (M110)	108	17	5	8	3.4	Length accommodates ammunition supply vehicle

FOOTNOTES:

¹Pit dimensions do not include entry ramp. Dimensions shown provide 3-ft clearance around vehicle.

²Excavation depth permits main weapon employment. Increasing depth approximately 30% provides complete protection.

³For production rate of 100 bank cubic yards per hour.

d. Table 1-30 lists deep cut emplacement dimensions for typical support type vehicles.

Table 1-30. Dimensions of Deep-Cut Emplacements for Typical Support Vehicles

Vehicle Type	Pit Dimensions (ft) ¹			Equipment (D7 Dozer) Hours ²	Comments
	Length	Width	Depth		
1/4 ton truck	18	12	7	0.6	Add 9 ft to length for cargo trailer
1 1/4-ton truck	20	13	9	0.9	
1 1/4-ton cargo truck	29	13	10	1.4	Add 5 ft to length for gamma goat (M561)
2 1/2-ton shop van	28	14	12	1.7	Add 14 ft to length for cargo or water trailer
5-ton cargo truck	38	14	10	2.0	
5-ton shop van	36	14	12	2.2	
10-ton cargo truck	34	16	12	2.4	
10-ton tractor w/van semitrailer	53	16	12	3.8	Dimensions shown are for trailer length of 30.8 ft For other trailers, add 23 ft to actual trailer length

FOOTNOTES:

¹Pit dimensions do not include ramp(s). Dimensions shown provide 3 ft clearance around vehicle.

²Use these figures for production rate of 100 bank cubic yards per hour.

e. Table 1-31 lists characteristics of typical multipurpose shelters.

Table 1-31. Characteristics of Multipurpose Shelters

Type of Position	Estimated Construction Time Manhours	Equipment Requirements	Small Arms Fire	Protection Provided ¹		Nuclear Weapons ³	Comments
				Conventional Weapons Blast and Fragmentation from Near-Miss Airburst Contact or Delay Rounds	Direct Hit on Overhead Cover (Contact Burst) ²		
Two-man sleeping shelter with 2-ft overhead cover	10	Hand tools	7.62mm	Small mortar on contact	Small mortar	Fair	
Metal culvert shelter with 2-ft overhead cover	48	Hand tools; backhoe	7.62mm	Small mortar no closer than 5 ft	None	Fair	
Inverted metal ship-plug container with 2-ft overhead cover	28	Hand tools; backhoe	12.7mm	Medium artillery no closer than 10 ft	Small mortar	Good	
Air transportable assault bunker with 2-ft overhead cover	60	Hand tools; backhoe	cannot be engaged	Medium artillery no closer than 30 ft	Small mortar	Very good	Construction time assumes rear area prefabrication of walls & floors
Timber post buried shelter with 2.5-ft overhead cover	48	Hand tools; backhoe	cannot be engaged	Medium artillery no closer than 30 ft	Small mortar	Very good	
Modular timber frame shelter with 2-ft overhead cover	96	Hand tools; backhoe	cannot be engaged	Medium artillery no closer than 20 ft	Small mortar	Very good	
Timber frame buried shelter with 2-ft overhead cover	84	Hand tools; backhoe	cannot be engaged	Medium artillery no closer than 25 ft	Small mortar	Very good	
Aboveground cavity wall shelter with 2-ft overhead cover	700	Hand tools; backhoe	12.7mm	Medium artillery no closer than 10 ft	Small mortar	Good	
Frame/fabric covered shelter with 18-inch overhead cover	25	Hand tools; backhoe	Cannot be engaged	Medium artillery no closer than 10 ft	Smaller mortar	Very good	Construction time assumes prefabricated frame
Hardened frame/fabric covered shelter with 4-ft overhead cover	45	Hand tools; backhoe	Cannot be engaged	Medium artillery no closer than 10 ft	Medium artillery	Excellent	This shelter provides improved nuclear protection to 30 psi
Rectangular frame/fabric covered shelter with 18-in overhead cover	38	Hand tools backhoe	Cannot be engaged	Medium artillery no closer than 15 ft	Small mortar	Very good	Construction time assumes prefabricated frame
Concrete arch shelter with 4-ft overhead cover	64	Hand tools dozer backhoe	Cannot be engaged	Medium artillery no closer than 5 ft	Medium artillery	Very good	Construction time assumes prefabricated arches and end walls
Metal pipe arch shelter with 4-ft overhead cover	58	Hand tools dozer backhoe	Cannot be engaged	Medium artillery no closer than 5 ft	Medium artillery	Very good	Construction time assumes preassembled arch and end sections

FOOTNOTES:

¹Chemical protection is assumed to be provided by individual protective masks and clothing.

²Round sizes are identified as follows: Mortar — small = 82 mm or less medium = 120 mm or less Artillery — small = 105 mm or less medium = 152 mm or less

³Nuclear protection ratings are given as Poor, Fair, Good, Very Good, and Excellent. For additional details on radiation, thermal, and blast effects, refer to FM 5-103.

f. Table 1-32 lists characteristics for revetment type protective barriers.

Table 1-32. Characteristics of Protective Barriers¹

Description	Estimated Construction Time for 10-ft Section Manhours	Equipment Requirements	Small Arms Fire	Protection Provided Against Conventional Weapons ²		Comments
				Blast and Fragmentation from Near-Miss Contact Burst ³	Infantry Antitank Weapons	
Landing material fragment shield	3	Welding; crane	None	Refer to Table 4-7	None	M8A1 steel landing material only
Earth revetment	3	Dozer; dump truck; scoop loader	12.7 mm	Medium artillery no closer than 5 ft	120 mm at base	
Soil-cement revetment	25	Hand tools; concrete mixer; crane w/concrete bucket	12.7 mm	Small artillery no closer than 5 ft	82 mm at base	Barrier requires forming
Earth revetment with retaining wall	20	Hand tools; scoop loader	12.7 mm	Medium artillery no closer than 5 ft	120 mm at base	
Log soil bin revetment	35	Hand tools; scoop loader	5.45 mm	Small artillery no closer than 5 ft	None	
Dimensioned timber soil bin	30	Hand tools; scoop loader	5.45 mm	Small artillery no closer than 5 ft	None	
Thin-walled revetment	12	Hand tools; scoop loader	5.45 mm	Smaller artillery no closer than 5 ft	None	Based on plywood design
Hardened thin-wall revetment	19	Hand tools; scoop loader	12.7 mm	Medium artillery no closer than 5 ft	120 mm at base	Based on plywood design, provides nuclear blast protection for drag sensitive targets
Relocatable soil bin revetment	5	Hand tools; backhoe	5.45 mm	Small mortar no closer than 5 ft	None	
Portable precast concrete revetment	29	Hand tools; concrete mixer; crane	7.62 mm	Medium mortar no closer than 5 ft	None	Small arms protection may be improved by placing one layer of sandbags on outer panel surface
Cast-in-place concrete revetment	35	Hand tools; concrete mixer; crane w/concrete bucket	12.7 mm	Small artillery no closer than 5 ft	None	Blast and fragment protection may be improved to large artillery by placing one layer of sandbags on outer panel surface
Asphalt armor portable panel 2 ft by 8 ft by 4 in	15	Hand tools; welding; hot asphalt source	7.62 mm	Small mortar no closer than 5 ft	None	

FOOTNOTES:

¹For comparative purposes, all barriers are 5 ft high with minimum thickness as specified in construction plans.

²Nuclear protection is minimal except as noted. Chemical protection is assumed to be provided by individual protection masks and clothing.

³Round sizes are identified as follows: Mortar — small = 82 mm or less
medium = 120 mm or less
Artillery — small = 105 mm or less
medium = 152 mm or less

SECTION V. GENERAL ENGINEER PLANNING DATA

1-13. TASKS. General engineering support includes those tasks which do not directly contribute to the mobility, counter mobility, and survivability of committed maneuver organizations. These tasks are located to the rear of the main battle area in the combat zone as well as the rear combat zone/communications zone. Engineer organizations have the primary responsibility for these tasks. Data furnished in this section provide the planner with estimates of time, materiel, and manpower requirements for general engineering tasks.

1-14. ARMY FACILITIES COMPONENTS SYSTEM (AFCS).

a. The AFCS is a tool to assist military planners, supply agencies and construction personnel at all levels that have a role in Army construction in theaters of operations. The AFCS uses a building block concept to permit maximum flexibility. The building blocks are items, facilities, and installations. The AFCS consists of the following series of four active Department of the Army technical manuals (TMs):

- (1) TM 5-301, which is used by military planners, contains installation, facility and prepackaged expendable contingency supply summaries. TM 5-301 is published in four volumes, each addressing a separate climatic zone. The summaries appearing in the four volumes include cost, shipping weight, and volume of material; estimated manhours to construct each facility and installation; and the cost, weight, and volume of the prepackaged expendable contingency supply kits. This manual may be used by planners at higher levels without referring to TM 5-302 and TM 5-303.
- (2) TM 5-302 provides construction drawings for use by units in a theater of operations. These manuals are intended for use by—

- Base development planners in determining facilities required to support Army functions.

- Engineer commands or units in preparing and issuing construction drawings.

- Construction personnel in the actual construction of facilities.

(3) TM 5-303 is generally used by planners, builders, and suppliers in the identification of items contained in the bills of materials. Each item for a facility is listed on the prepackaged expendable contingency supply summary by an NSN, abbreviated description, and the unit of issue. The material cost, shipping weight, description of each facility, volume, and estimated man hours are also shown in the prepackaged expendable contingency summary.

(4) TM 5-304 aids the AFCS user to plan and carry out Army construction support missions in the theater of operations (TO). It is intended to provide users with a single source of reference and information concerning the operation of the system, a list of available system products, and example problems demonstrating the use of the system. Also included in this TM is information on requisition and supply procedures and definitions of terms and abbreviations.

- b. Standards of construction are identified for the purpose of managing construction resources. The availability of resources, the operational plans and the using unit's mission will dictate the standards of construction to be used in theaters of operation. JCS Publication 3 sets forth the standards of construction that are applicable to a TO. The standards are based primarily on the duration of the contingency and are defined as follows: initial (INT) — 0 to 6 months; intermediate (INR) — 6 to 24 months; and temporary (TPR) — 6 to 24 months. The 24-60 months standard has been deleted.

c. Design criteria include—

- (1) Design life. The nature of materials used in construction of the AFCS facilities and the structural

aspects of the designs are such that the life of facilities will normally exceed five years when appropriate maintenance is performed.

- (2) Climatic zones. The facilities in the system are designed to operate in one or more of four climatic zones. The four climatic zones are—

- Tropical Zone. Category 1 — wet warm: operational temperature between 40°F and 75°F. Category 2 — wet hot: operational temperature between 40°F and 95°F.

- Desert Zone. Category 3 — humid hot coastal desert: operational temperature between 80°F and 100°F. Category 4 — hot dry: operational temperature between 90°F and 125°F.

- Temperate Zone. Category 5 — intermediate hot dry: operational temperature between 70°F and 110°F. Category 6 — intermediate cold: operational temperature between -25°F and -5°F.

- Frigid Zone. Category 7 — cold: operational temperature between -50°F and -30°F.

- d. The construction estimates are based on standard construction practices. The estimates do not include effort of administration, mobilization, planning, nor effort lost because of weather delay. The estimates reflect actual working time required for the task by skilled personnel in the temperate zone. Estimates for other climatic zones are obtained by applying the following adjustment factors:

Tropical	1.45
Desert	1.15
Frigid	2.57

Other adjustments are necessary if the personnel are untrained. A unit's actual production capability, based

on operating experience, should be used when available. The construction estimates for facilities and installations are subdivided into vertical, horizontal, and general construction labor.

1-15. FACILITY CATEGORIES.

a. Currently, TM 5-301 categorizes facilities into the following classes:

- Class 100 — Operation and Production Facilities (including airfields, ammunition storage, communications, pipelines, piers, and wharfs).
- Class 200 — Maintenance and training facilities (including marine railways, marine and vehicle maintenance shops, armament artillery and signal shops, and railroad repair shops).
- Class 300 — Research, development, and test facilities.
- Class 400 — Supply facilities (including petroleum, oils, and lubricants; tanks; magazines; and storehouses).
- Class 500 — Hospital and medical facilities.
- Class 600 — Administrative facilities.
- Class 700 — Housing and community facilities (including quarters, mess, bathhouse, latrine, generating plants, boiler plants, sewage disposal).
- Class 800 — Utilities and ground improvements (including generating plants, boiler plants, sewage dis-

posal, nonstandard bridges, and ports; dry cargo unloading facilities).

- Class 900 — Miscellaneous (including pre-engineered metal buildings, wood frame construction buildings, paneled wood building designs, and lightweight relocatable structures).

b. Each facility is further identified by a five numeric and two alpha character code. The first three numerals identify the facility class. The complete code also identifies the corresponding construction drawing in TM 5-302. The AFCS facility classes are derived from DA facility category codes which are published in AR 415-28. Planning factors applicable to DA category code facilities are general in nature and may vary considerably depending on the situation. These factors apply primarily to long-range planning and when more specific information about a given situation is not available.

1-16. AIRFIELD/HELIPORT CONSTRUCTION (AFCS Series 111XX - 113XX).

a. For planning purposes, the Air Force/Army will furnish/define aircraft characteristics, allowance factors and formulas, broad design, layout and construction criteria, and policy guidance in the form of definitive drawings, specifications, regulations, manuals, or other appropriate references applicable to the construction requirements peculiar to their particular aircraft. They also will submit their specific requirements in broad engineering terms together with general site and ultimate development plans. Army engineer troops will be responsible for site reconnaissance and recommendations, surveys, flexible pavement design, layout adaption, and construction.

tion. The following general factors are applicable to airfield/heliport construction:

Category Code No.	Facility Name	Criteria
11130	Helipad	1/unit
	Helicopter Parking Pad	.75 pad/Act
	Weather Station	1775 sf/unit
	Airfield Operations Facility	100 sf/Act; 8600 sf max
	Aviation Unit Operations Building	2200 sf
	Weather Observation Station	800 sf/unit
	Photo Lab	90 sf/photo lab specialist
	Air Passenger Terminal	25 sf/passenger (1st 500) 10 sf/passenger (after 500)

b. Airfield or heliport types are derived by combining designated controlling aircraft or helicopters, respectively, with the appropriate military area (battle, forward, support, or rear area) within a TO. Typical TO airfield and heliport concepts are found in TM 5-330.

c. The characteristics of current Air Force and Army aircraft and helicopters, as well as airfield and heliport criteria and layout, are contained in TM 5-330. Minimum airfield and helipad and heliport area requirements are given in Tables 1-33, and 1-34a, and 1-34b.

Table 1-33. Minimum Airfield Area Requirements

Airfield Type	Possible	Parking Apron Area (m ²)	Runway Area (m ²)	Overrun Area (m ²)	Taxiway Area (m ²)	Shoulder Area (m ²)	Warm-up Apron Area (m ²)	Total Aircraft Traffic Area ¹ (m ²)	Dustproofing and/or Waterproofing Area ² (m ²)
	Using Aircraft US Type								
Battle area ⁴									
Light lift	C-7A ³	None	4,650	700	3,900	4,460	2,600	11,150	28,610
Medium lift	C-130 ³	None	11,150	1,120	6,780	8,220	2,790	20,720	72,280
	C-123 ³								
Forward area ⁴									
Surveillance	OV-10A ³	6,690	13,940	None	8,080	10,220	2,600	31,310	55,100
Light lift	C-7A ³	6,690	6,690	2,230	4,460	5,430	2,600	20,440	44,780
Medium lift	C-130 ³	8,360	13,940	3,360	8,180	10,410	2,790	33,260	104,330
	C-7A								
Support area ⁴									
Surveillance	OV-10A ³	16,720	16,720	3,350	9,480	12,080	2,600	45,520	74,880
Light lift	C-7A ³	72,280	8,360	3,350	5,300	6,830	2,600	88,540	121,330
Medium lift	C-130 ³	34,750	19,500	3,350	13,190	14,120	2,530	70,000	163,420
	C-7A								
Heavy lift	C-141 ³	37,440	55,740	4,650	36,140	20,250	2,690	132,020	303,890
	C-5A ⁵	(99,030)	(68,280)	(13,940)	(43,760)	(55,740)	(10,310)	(221,300)	(426,800)
	C-124 ³								
Tactical	F-4 ³	51,000	27,870	3,350	18,210	8,040	2,420	99,500	124,770
	A-10								
	F-15A								
	F-16								
	F-111 ³								
Rear area									
	OV-10A ³	48,120	20,070	4,000	11,330	12,360	2,370	81,940	135,270
	C-7A								
Rear area ⁴									
Medium lift	C-130 ³	155,150	40,130	6,690	21,550	25,900	2,550	219,400	372,260
Heavy lift	C-141 ³	155,150	144,930	14,590	61,320	41,250	3,340	364,700	685,900
	C-5A ⁵								
	C-135								
Tactical	F-4 ³	51,000	80,270	20,070	50,170	46,820	3,340	184,800	271,460
	A-10								
	F-15A								
	F-16								
	F-111 ³								
	F-105								

FOOTNOTES:

¹Traffic area includes parking, runway, taxiway, and warm-up areas.

²This area includes total traffic area plus overrun area plus an area around the perimeters with a width of possible wing overhang for dustproofing purposes.

³Particular aircraft that is critical in load or ground run which control the area requirements.

⁴Battle area is brigade base, service life: 3 days; forward area is division base, service life: 2 weeks; support area is corps area, service life: 1 to 2 months; rear area is Communications Zone, service life: 6 to 12 months.

⁵Use number in Parentheses For C-5A Aircraft.

CONSIDERATION: • m² = Meters squared.

Table 1-34a. Minimum Area Requirements for Helicopters

Type	Landing ^{1,2} Area	Parting ^{1,2} For Landing Pad	Runway ft (m)	Taxiway ft (m)	Taxi Hoverlane ft (m)	Overrun ft (m)	Wear Zone ft (m)	500 ft Take Off Clearance (152.4m)	1500 ft Approach Departure ft (m)
HELIPAD FORWARD AREA									
OH-58	72 × 72 (518.4) 21.9 × 21.9 (479.6)	12 × 12 (144) 3.7 × 3.7 (13.7)						Widths: same as approach- departure (for 1st 500 ft) (152.4m)	Widths: begin/end 72/500 30/152.4
UH-1, EH-1 UH-60, EH-60 AH-1, AH-64	100 × 100 (10000) 30.5 × 30.5 (930.2) 150 × 125 (18750)	20 × 20 (400) 6.1 × 6.1 (37.2) 50 × 25 (1250)							100/500 30.5/152.4
CH-47	45.7 × 38.1 (1741.2)	15.2 × 7.6 (115.9)							125/500 38.1/152.4
CH-54	150 × 150 (22500) 45.7 × 45.7 (2088.5)	50 × 50 (2500) 15.2 × 15.2 (211)							150/500 45.7/152.4
SUPPORT AREA									
OH-58	105 × 105 (11025) 32 × 12 (1024)	12 × 12 (144) 3.7 × 3.7 (13.7)							105/500 12/152.4
UH-1H, EH-1 UH-60, EH-60 AH-1, AH-64	120 × 120 (14400) 36.6 × 36.6 (1339.6) 150 × 150 (22500)	20 × 20 (400) 6.1 × 6.1 (378.2) 50 × 25 (1250)							120/500 36.6/152.4 150/500
CH-47	45.7 × 45.7 (2088.5)	15.2 × 7.6 (115.5)							45.7/152.4
CH-54	150 × 150 (22500) 45.7 × 45.7 (2088.5)	50 × 50 (2500) 15.2 × 15.2 (231)							150/500 47.7/152.4
H-58	105 × 105 (11025) 32 × 32 (1024)	25 × 25 (625) 7.6 × 7.6 (57.8)							105/500 32/152.4
UH-1H, EH-1 UH-60, EH-60 AH-1, AH-64	120 × 120 (14400) 36.6 × 36.6 (1339.6) 150 × 150 (22500)	40 × 40 (1600) 12.2 × 12.2 (148.8) 100 × 50 (5000)							120/500 16.6/152.4 150/500
CH-47	45.7 × 45.7 (2088.5)	30.5 × 15.2 (463.6)							45.7/152.4
CH-54	150 × 150 (22500) 45.7 × 45.7 (2088.5)	100 × 100 (100000) 30.5 × 30.5 (930.3)							150/500 45.7/152.4

Table 1-34a. Minimum Area Requirements for Helicopters — (Cont'd)

Type	Landing ^{1, 2} Area	Parking ^{1, 2} For Landing Pad	Runway ft (m)	Taxiway ft (m)	Taxi Hoverlane ft (m)	Overturn ft (m)	Wear Zone ft (m)	500 ft Take Off Clearance (152.4m)	1500 ft Approach Departure ft (m)
HELIPORT FORWARD AREA									
OH-58					75 (22.9)			25/850 22.9/259.1	
UH-1H, EH-1 UH-60, EH-60 AH-1, AH-64					140 (42.8) 180 (54.9) 200 (61)			140/850 42.8/259.1 180/850 54.9/259.1 200/850 61/259.1	
CH-47									
CH-54									
SUPPORT AREA									
OH-58					100 (30.5)			100/850 30.5/259.1	
UH-1H, EH-1 UH-60, EH-60 AH-1, AH-64 CH-47					200 (61) 240 (73.2)			200/850 240/850 61/259.1	
CH-54									
CH-54									
REAR AREA									
OH-58					100 (30.5)			100/850 30.5/259.1	
UH-1H, EH-1 UH-60, EH-60 AH-1, AH-64 CH-47					200 (61) 240 (73.2)			200/850 240/850 61/259.1	
CH-54									
CH-54									

FOOTNOTES:

¹Includes clear area.²Units of data are as follows:

- edge dimensions in linear feet (area in square feet).
- edge dimensions in linear meters (area in square meters).

d. For dustproofing/waterproofing, multiply required area by the following factors.

Table 1-34b. Dustproofing/Waterproofing Area Estimate Factors

Design Helicopter	Helipad			Helipoint		
	Forward	Support	Rear	Forward	Support	Rear
OH-58	3.9	1.8	1.8	—	—	—
UH-1H, EH-1	3.5	2.8	2.8	1.2	1.1	1.1
UH-60, EH-60						
AH-1, AH-64						
CH-47	9.4	7.9	7.9	1.6	1.4	1.4
CH-54	5.7	5.7	5.7	—	1.3	1.3

e. Tables 1-35 and 1-36 provide estimates of the horizontal construction effort in battalion days required to construct new airfield and heliport facilities, respectively. The data presented in the tables

were derived using the construction effort equations contained in TM 5-330 and are intended to provide only approximate information for several different site conditions. Particular attention should be paid to the

site conditions as stated in the tables when using these estimates. For site conditions other than those stated, the planner should consult TM 5-330.

Table 1-35. Work Effort Required to Construct New Airfield
(Engineer Combat Battalion-Days)

Site Conditions	Good	Average	Difficult
Soil Type	Sand	Clay	Lateritic
Soil Moisture	Dry	Dry	Wet
Subgrade CBR	Greater than 9	Greater than 9	Greater than 9
Slope	2%	2% to 10%	2% to 10%
Soil Thickness	Less than 2'	2' to 20"	2' to 20"
Vegetation	Grass	Savanna	Grass
Battle Area			
Light Lift	0.2	0.5	0.7
Medium Lift	1.4	3.4	5.1
Forward Area			
Liaison	0.2	0.5	0.4
Surveillance	0.9	2.2	3.4
Light Lift	0.6	1.5	2.1
Medium Lift	2.7	6.9	11.3
Support Area			
Liaison	0.2	0.4	0.5
Surveillance	1.4	3.5	5.5
Light Lift	1.2	3.0	4.3
Medium Lift	8.2	20.8	42.9
Heavy Lift	23.4	59.1	84.0
Tactical	12.7	32.0	42.9
Rear Area			
Army (light lift)	2.0	5.0	8.17
Medium Lift	32.9	83.1	145
Heavy Lift	46.2	117	187
Tactical	21.5	54.4	72.0

CONSIDERATIONS:

Conversion factors:

- For engineer combat battalion, heavy, multiply the above battalion-days by 0.5.
- For engineer battalion, airborne, supplemented by engineer light equipment company, multiply the above battalion days by 0.83.
- For engineer battalion, air assault, multiply the above battalion-days by 1.73.

Table 1-36. Work Effort Required to Construct New Heliport
(Engineer Combat Battalion-Days)

Site Conditions	Good	Average	Difficult
Soil Type	Sand	Clay	Lateritic
Soil Moisture	Dry	Dry	Wet
Subgrade CBR	Greater than 4	Greater than 4	Greater than 4
Slope	2%	2%-10%	2%-10%
Vegetation	Grass	Savanna	Grass
Soil Thickness	Less than 2'	2' to 20'	2' to 20'
Forward Area			
UH-1/60 Company	0.8	1.9	5.3
Air Cavalry Troop	0.8	1.9	5.3
Combat Aviation Bde	2.1	5.0	13.9
Support Area			
UH-1/60 Company	1.1	2.7	8.1
Air Cavalry Troop	1.0	2.5	7.4
CH-47 Company	6.3	16.0	30.4
CH-54 Company	5.2	13.1	25.2
Combat Aviation Bde	2.2	5.2	16.2
Rear Area			
UH-1/60 Company	1.2	2.9	9.4
Air Cavalry Troop	1.1	2.6	8.5
CH-47 Company	7.0	17.6	33.9
CH-54 Company	5.4	13.6	25.7
Combat Aviation Bde	2.4	5.8	18.8

CONSIDERATIONS:

Conversion factors:

- For engineer combat battalion, heavy, multiply the above battalion-days by 0.5.
- For engineer battalion, airborne, supplemented by engineer light equipment company, multiply the above battalion-days by 0.83.
- For engineer battalion, air assault, multiply the above battalion-days by 1.73.

1-17. PORT FACILITIES (AFCS Series 150XX-159XX).

a. TM 5-360 is a basic source of information on port construction facilities.

b. Requirements for port construction are based on port capacity expressed in terms of STONs per day; therefore, the capacities of standard berths are used as planning factors, together with other port planning factors. Port facilities are categorized as deep draft for ocean-going vessels and shallow draft for lighters, barges, and landing craft. Use the following formulas to compute requirements:

Type	Facility	Length × Width (meters)
	Containership wharf*	275 × 24
	Breakbulk finger pier	150 × 27
	Containership finger pier	275 × 24
	RO/RO berth	185 × 24
	LST/LCM/LCU ramp	50 × 5
	Lighterage berth	33 × 18
	Delong A	90 × 24
	Delong B	45 × 18

*One side berth only; 15 additional acres of stabilized hard-stand per berth are required for container storage and sup-port facilities.

c. Water area requirements for port facilities include the following:

(1) During the site investigation for a possible port location, consider the following:

- Basin protection.
- Bottom conditions.
- Shore area.
- Communication facilities.
- Water depth.

(2) Water requirements for port development (all dimensions are based on largest vessel to use port) include the following:

(a) Channels: width to include—

1. Single lane: Maneuver lane = 160 - 200% beam width. Clearance between maneuver lane and bank-beam is width of largest vessel to use port.

2. Multiple lane: Maneuver lane = 160 200% beam width. Clearance between maneuver lane and bank-beam width of largest vessel to use port. Clearance between ships passing-beam of largest vessel but not less than 30 meters.

(b) Turning basin to include—

1. Length and width = 2 to 4 times length of largest vessel using port.

2. Smaller dimensions are possible if turning dolphins are used.

(c) Anchorage area is determined by using the following formula:

$$R = 4 \times D + F + L + C$$

Where:

- R = Radius
- D = Depth of water (MLW)
- F = Freeboard
- L = Length of largest vessel
- C = Safe clearance - 15 meters

(d) Depth (low tide) data follow:

Navy capital vessels	10-13 meters
Cargo:	
Breakbulk	9-11 meters
Container	10-13 meters
RO/RO	11 meters
Tankers	10-28 meters
Bulk carriers	12-18 meters

(For construction in the TIO, dredged depths should not exceed 13 meters.)

1-18. MAINTENANCE AND PROTECTION FACILITIES (AFCS Series 211XX).

a. Maintenance facilities are required to provide covered working space for unit level, intermediate direct support, and intermediate general support maintenance operations. Gross planning factors have been developed for the broad categories of maintenance facilities. Other maintenance facilities such as vehicle wash racks and grease racks are determined on an "as required" basis.

b. Maintenance facility requirements for Army aircraft are determined on a unit basis as follows (factors developed do not include facility requirements for unit ground equipment and vehicles):

TOE	Type Facility	Sq Ft Per Unit*
01-385L100	Attack Hel Bn	Aviation Unit Maint, (AVUM)
01-385L100		53,000
17-205J410 Cav		
Sq		
17-205J420		
w/AH-64		
w/AH-15		50,000
01-287J400 GS		
Avn Co	AVUM	25,000
01-257J410 Cbt		
Spt Avn Co	AVUM	25,000
55-427J410 Avn		
Maint Co	Aviation Inter-mediate Maint (AVIM)	84,000

*Assumes maximum shop space.

c. When bases are small, widely separated, and relatively inaccessible, Marine maintenance facility (AFCS series 213XX) requirements are provided to the following types of small craft units:

TOE	Unit	Sq Ft Per Unit
55-128	Mdm Bt Co	2,500
55-129	Hvy Bt Co	1,200
55-137	Mdm, Lighter Co (ACV)	50,000*
55-139	Mdm, Amph Co	2,500
55-530	LARC LX Pit	400

*Includes shop, internal external storage space.

d. A maintenance facility for tank automotive (AFCS series 21410) is provided on a unit basis as follows:

TOE	Unit	Sq Ft Per Unit
29-137	Hvy Equip Maint Co (GS)	5,562
29-207	Maint Co Fwd (DS)	5,130
29-427	Maint Co (DS)(GS)	5,588

e. A sheltered facility for ordnance weapons maintenance (AFCS series 21430) is provided on a unit basis as follows:

TOE	Unit	Sq Ft Per Unit
29-137	Hvy Equip Maint Co (GS)	4,513
29-209	Maint Fwd Co (DS)	300
29-427	Maint Co (DS)(GS)	373

f. The following units support ordnance/ammunition maintenance (AFCS series 21430) and renovation:

TOE	Unit	Sq Ft Per Unit
09-530	Ammo Maint Tm (GS)	See next
09-064	Conv Ammo Co (DS)	paragraph
09-074	Conv Ammo Co (GS)	

A sheltered maintenance facility is required for maintenance and renovation of ammunition. For ammunition depots and ammunition supply points, 2 square feet per STON of ammunition for maintenance and renovation plus 1 square foot per STON for proper surveillance are provided. Therefore, the total allowance is 3 square feet per STON of ammunition. Requirements are determined based on the following formula:

$$\frac{\text{lbs per man}}{\text{per day}} \times \frac{\text{storage}}{\text{population}} \times \frac{3 \text{ sq ft}}{\text{level}} \times \frac{\text{per STON}}{\text{per STON}} = (\text{Sq Ft})$$

2,000

g. A sheltered facility is required for repair and maintenance of transmission and reception communications-electronics equipment (AFCS series 217XX). Requirements are determined on a unit basis as follows:

TOE	Unit	Sq Ft Per Unit
29-134	LE Maint Co (GS)	3,276
29-209	NonDiv Maint Co (DS)	3,395
29-427	Maint Co (DS)(GS)	1,676

The following general planning factors apply to electronic-communications maintenance facilities:

No.	Facility Name	Criteria
21710	Elec/Comm Maint Shop	205 sq ft/technician + 525 sq ft/20 technicians
21740	Avionics Repair Shop	30 sq ft/act; 600 sq ft min

h. A sheltered facility is required for miscellaneous procured items and equipment (DOD category 218C (ground support equipment shop)). Requirements are determined on a unit basis as follows:

TOE	Unit	Sq Ft Per Unit
29-137	Hvy Equip Maint Co (GS)	420
29-139	Coll and Class Co	6,300
29-209	Nondiv Maint Co (DS)	5,400
29-427	Maint Spt Co (DS)(GS)	2,161

i. Requirements for DOD category code 219B (maintenance-facilities engineer activity) units below battalion level are normally absorbed within company/battery level supply sections. For installation planning based on an intermediate or longer range contingency for occupancy by a battalion or larger unit (or units), a covered space allocation of 2 square feet per man is required to support the repairs and utilities maintenance function.

1-19. SUPPLY FACILITIES.

a. The supply data contained in this paragraph are for general planning purposes. Detailed data and consumption formulas for all classes of supplies are contained in Chapter 2, Tables 2-6 through 2-31.

b. Requirements in connection with petroleum, oils, and lubricants (POL) (AFCS series 410XX) systems include construction, major maintenance, and major damage repair to pipelines, pumping facilities, and storage facilities. A complete pipeline system includes tanker discharge facilities and receiving tank farm at a port or beach (marine terminal; one or more parallel pipelines; tank farms (tactical petroleum terminals) which are spaced along the system and vary in capacity depending on supply needs and specified theater levels of supply; and dispensing facilities which are provided at tank farms and supply points. Generally, POL pipelines are programmed when requirements, developed according to planning factors indicated, exceed 6,500 barrels per day of POL per day. Generally (depending on distance, roads, and terrain), pipeline transportation of POL is cost effective when requirements exceed 6,500 barrels per day and measures to secure pipelines from sabotage are effective. Liquid fuel is divided into ground, aviation, and heating fuel for purposes of analyzing gross storage requirements. It is distributed through a system of terminals and major bulk storage points. Using activities draw directly from the nearest storage point. Storage tanks are provided at terminals and major storage points and in forward areas. Analysis of requirements is as follows:

(1) Bulk fuel and storage requirements for Army forces are determined by consumption rates and storage objectives as shown in the following formula:

$$\frac{\text{consumption}}{\text{rate}} \times \frac{\text{population}}{\text{population}} \times \frac{\text{storage}}{\text{objective}} = \frac{\text{storage}}{\text{capacity required}}$$

Consumption rate is measured in barrels (bb) per man per day and storage objective is a factor that measures reserve storage capacity of the tank farm in days.

(2) The Air Force determines their bulk fuel and storage requirements.

(3) The following planning factors and those in Table 1-37 may be used in determining both Army and Air Force requirements.

Facility Description	Criteria
Liquid fuel storage	
Ship fuel	
storage/distillage	
AVGAS storage	
Individual aircraft	To be developed
	Acft (single engine, reciprocating) x 1.6 bbl/acft/days x days of supply
	Acft (multi-engine, reciprocating) x 9.7 bbl/acft/day x days of supply
	Men x 0.04 bbl/man/day x days of supply
	Men x 0.15 bbl/man/day x days of supply
Diesel storage	
MOGAS storage	
JP storage	
Individual aircraft type	
Unit consumption	Acft (single engine, turbine) x 5.7 bbl/acft/day x days of supply
	Patrol sqdn (P-3) x 1,500 bbl/sqdn/day x days of supply
	Hel sqdns (Navy/Marine Corps) x 183 bbl/sqdn/day x days of supply
	A-7 (18 acft sqdn) x 510 bbl/sqdn/day
	A-10 (18 acft sqdn) x 675 bbl/sqdn/day
	F-4 (24 acft sqdn) x 1674 bbl/sqdn/day
	F-15 (24 acft/sqdn) x 1500 bbl/sqdn/day
	F-16 (24 acft/sqdn) x 660 bbl/sqdn/day
	F-111 (24 acft/sqdn) x 1420 bbl/sqdn/day
	C-130 trans sqdn (16 acft/sqdn) x 1265 bbl/sqdn/day
Heating fuel storage	Temperature zone-men x 0.03 bbl/man/day x days of supply

**Table 1-37. Aircraft Unit Fuel Consumption
AARCA III**

Aircraft Type Unit	AH-1S	UH-60	UH-1V	UH-1H	OH-58C	CH-47D	U-21	UV-18	OV-10	Aircraft Total	Gallons of Fuel Per Company or Troop Per Day
ATTACK HELICOPTER CO											
01-387L100	21			3	12					36	7428
AIR CAVALRY TROOP											
17-052H000				13	6					19	4119
17-058H100	9			7	10					26	5192
17-108H000	9			7	10					26	5192
17-202H500				5	4					9	1736
COMBAT SUPPORT											
Aviation CO											
01-207L000 ¹		15		23						15/23	5538/6339
01-257J430		14								14	5168
MEDICAL/AIR											
AMBULANCE CO											
08-137H200		25								25	6890
08-66H0RA		6								6	1654
08-660H0RG		6								6	2215
COMBAT SERVICE SUPPORT CO											
01-117H700				17	20		21			21	3877
01-127H100				14	15		2			39	6842
01-137H100				10	10					41	9076
07-202J000								2		20	3650
31-127H400	4									6	1845
55-167J100		2		1		24				25	25236
55-459J300										2	738
AERIAL/SURVEILLANCE CO											
34-147J000		3							14	14	2584
34-114H110		3								3	1108
34-144J400		3								3	1108
TARGET ACQUISITION											
06-797J00				3	18					21	2436
HEADQUARTERS CO											
05-052H600				4	3					7	1370
07-102H000				3	8					11	1542
11-412H800				5	7		3			15	2558
19-272H410					5					5	447
19-272H420					5					5	447
67-042L000				4	6					10	1638
77-102H000				3	8					11	1542
87-102J410				2	6					8	1087

FOOTNOTE:

¹Unit equipped with either UH-60s or UH-1Hs, not both.

c. Storage requirements for ammunition (AFCS Series 420XX - 429XX) are determined by consumption rates, the square feet per STON of the types of ammunition to be stored, and the storage objective to be achieved at each location. Storage locations are determined by distribution system considerations. Factors for ammunition storage facilities are developed by using net square feet per STON of ammunition based on dimensions and weights of crated items and mode of stacking as determined by field measurements. These factors vary widely depending on the type of ammunition. Average gross storage factor per STON of ammunition is 8.05 square feet. Sheltered storage facility requirements for ammunition at depots and ammunition supply points (ASPs) are determined using the following formula (data are based on overall consumption rate of 31.29 lb per man per day and 10 percent of ammunition requiring covered storage).

$$.0063 \text{ sq ft} \times \text{population} \times \text{storage} = \text{sq ft}$$

man/day objective
(days)

Open storage requirements for ammunition at depots and ASPs are determined using the following formula (data are based on overall consumption rate of 31.29 lb/man/day and 90 percent of ammunition in open storage):

$$.019 \text{ sq yds} \times \text{population} \times \text{objective} = \text{sq yds}$$

man/day storage
(days)

d. The following general planning factors apply to cold storage facilities (AFCS series 431XX):

Supply Class	Consumption Rate ¹ (lbs/man/day)	By Per- cent ¹	Gross Storage Factor ¹ (cubic feet/man/day)
I	1.21	100	.0835 ²
VI	3.20	10	.0221
VIII	1.22	10	.0048
IX	2.50	1.6	.0017

FOOTNOTES:

¹Representative figures may be adjusted for local experience.

²Based on 8 feet stack height.

To obtain the requirements, use the following formula:

$$\text{gross storage} \times \text{population} \times \text{objective} = \text{cubic feet of cold storage factor (days)}$$

(Unit level cold storage facility requirements are determined for each location based on a factor of 0.5 cubic feet per man.)

e. The following general planning factors apply to covered storage-warehouse/storehouse facilities (AFCS series 441XX).

Supply Class	Consump- Rate ¹ (lbs/man/ day)	Cold Storage Factor ¹ (sq ft/ man/day)
I Subsistence	4.41	100
Non refrigerated-MRE	6.51	100
Combat rations-C ration	3.67	60
II Clothing, tentage, and individual items	0.59	3
III Packaged POL	8.50 ²	10
IV Construction materials	3.20	90
VI Personal demand items	15.00	15
VII Major end items	1.22	90
VIII Medical material	2.50	58
IX Repair parts		.0077

FOOTNOTES:

¹Representative figures may be adjusted for local situations.

²Figure is further divided into two categories: 4.0 lbs/man/day obstacle/fortification materials (1983 USAREUR/ESC study) and 4.5 lbs/man/day construction materials in support of CESP. Requirements for CESP will generally lag requirements for obstacle/fortification materials.

To obtain the requirement, use the following formula:

$$\text{gross storage} \times \text{population} \times \text{objective} = \text{sq ft of covered storage factor (days)}$$

f. Unit level open storage facility requirements (AFCS series 452XX) are determined for each location based on a factor of 0.6 square yards per man plus five square yards per vehicle. Aviation maintenance companies require a minimum of 2500 square yards.

1-20. MEDICAL AND DENTAL FACILITIES (AFCS Series 510XX-560XX).

a. Requirements are provided on a unit basis as follows:

TOE	Unit	Category Code	Sq Ft/Unit
08-510	Fld Hosp	510A	101,400
08-551	Gen Hosp, 1000-bed	510	203,101
08-564	Sta Hosp, 200-bed	510	65,800
08-565	Sta Hosp, 300-bed	510	90,600
08-566	Sta Hosp, 500-bed	510	129,900
08-650	Med Lab	550B	2,000
08-500(MA)	Disp, Misc Team	550A	2,000
08-500(MB)	Gen Disp, Misc Team	550A	2,000
08-500(MC)	Gen Disp, Misc Team	550A	4,000
08-590	Conv Gen	560A	213,280

b. The following general planning factors apply to medical and dental facilities:

Category Code No.	Facility Name	Criteria
51010	Hospital	10 to 100 beds; 550 sq ft/bed 101 + beds; 375 sq ft/bed
54010	Dental Facilities	500 sq ft/dental set
55010	Medical Clinic	0 to 100 visits; 110 sq ft/visit 101 to 200 visits; 85 sq ft/visit 200 + visits; 60 sq ft/visit

1-21. ADMINISTRATIVE BUILDINGS (AFCS Series 610XX). Administration includes the functional areas required to support the management of operations, training, maintenance, production, supply, distribution, housing, community facilities, utilities, ground improvements, and real estate. It does not incorporate automatic data processing equipment for which service planning factors will be used. An average planning factor of 90 square feet per occupant is the established criterion.

1-22. TROOP HOUSING (AFCS Series 721XX-725XX).

a. AFCS provides prepackaged troop housing and bath and mess facilities to accommodate troops under initial and temporary construction standards. For emergency troop housing, the following planning factors are based on field experience of providing minimum-essential facilities consistent with functional needs for limited tenure (theater policy sets the construction standard):

Type Of Housing	Sq Ft Per Man*
BOQ	110
EM	72

*Does not include mess, latrines, or showers.

b. The following general planning factors apply to medical and dental facilities:

Category Code No.	Facility Name	Criteria
72210	Mess hall incl kit/dining	0 to 250; 20 sq ft/person served 251 to 500; 14 sq ft/person served 500 to 1000; 12 sq ft/person served 1000 +; 11 sq ft/person served

c. The Geneva conventions stipulate that prisoners of war (PW) are to receive facilities equal to those of US troops in the same TO. However, the quantity of such facilities is less than those provided for US troops. The reduction in the quantity of facilities is justified on the basis of a greater flexibility in scheduling PW activities. Requirements for PW facilities are determined on a unit basis as follows:

TOE	Unit	Sq Ft Per Unit*
19-256	HHC, MP PW Camp	12,283,920

*Based on provision of PW facilities for 12,000 PW/civilian internees.

1-23. TROOP SUPPORT FACILITIES (AFCS Series 730XX-740XX).

a. The following general planning factors are applicable to troop support facilities:

Category Code No.	Facility Name	Criteria
73010	Fire Station	2.6 x size of veh + 90 sq ft/admin occupant
73016	MP HQ	250 sq ft/admin occupant + 50 sq ft/confinee
73020	Bakery	0.6 sq ft/person supported
73030	Laundry	500 to 2500; 4.4 sq ft/person
		2501 to 7500; 3.3 sq ft/person
		7501 to 20,000; 3.0 sq ft/person
		20,001 to 60,000; 2.7 sq ft/person
73031	Dry Cleaning	0 to 2000; 4.4 sq ft/person 2000 to 7000; 1.75 sq ft/person 7000 + 1.0 sq ft/person

and temporary stockades are basically similar. They include buildings for the administration of the stockades and the housing of prisoners, areas for training and recreation, and means for making the buildings and areas secure against escape. Field stockades are temporary and are established by division, corps, and army as required. Requirements for stockades are determined on a unit basis as follows:

TOE	Unit	Sq Ft Per Unit*
19-316	HHC, MP bn (stockage) (rehab center)	1,907,9289

*Based on provision of stockage/rehabilitation center for 1,000 military prisoners.

c. Community facilities AFC Series 740XX) include all facilities provided for personnel support, service, morale, welfare, and recreation. A gross planning factor of 9.5 square feet of indoor facility per man has been developed. Outdoor recreation spaces must be considered separately based on the situation and area available. The following general planning factors have been developed for specific community facilities:

Category Code No.	Facility Name	Criteria
74018	Chapel	1.785 sq ft/person
74022	Craft/Hobby Shop	1.0 sq ft/person
74034	Gymnasium	3.3 sq ft/person
74041	Library	0.75 sq ft/person
74047	NCO Club	7.5 sq ft/person
74048	Officers Club	9.5 sq ft/person
74053	Post Exchange	1.2 sq ft/person
74059	Post Office	0 to 5000; 0.5 sq ft/person
74068	Service Club	1000 to 3000; 6 sq ft/person
74077	Theater w/o stage	3000+; 5.5 sq ft/person 1 sq ft/person (5 sq ft/seat)

b. Military police stockade and rehabilitation centers (AFCS Series 73015) required for permanent

1-24. UTILITIES AND GROUND FACILITIES (AFCS Series 811XX-824XX).

a. Electrical power generation and distribution (AFCS Series 811XX-817XX) requirements are developed based on the planner's knowledge of the type of installation, the nature of activities conducted and unusual power requirements. General planning factors include the following:

Installation	0.7 kw/man
Deep draft berth	250 kw/berth
Hospital	1.6 kw/bed

These factors do not include special test, maintenance, and heavy industrial operations, nor backup and emergency requirements. See FM 5-35 and JCS Publication 3 for more detailed planning information.

b. Sewage treatment-refuse disposal (AFCS Series 831XX-833XX) requirements are based on a general planning factor of 70 percent of the total potable water supply requirement, as delineated in subparagraph c. Also, a general planning factor of 52.5 gallons per day (GPD) per man has been developed.

c. Requirements for collection and disposal of garbage and refuse for facilities of an intermediate or temporary nature are based on the following general planning factors:

Garbage	2.5 lbs/man/day
Refuse	1.5 lbs/man/day

Factors for maneuver elements vary considerably with the situation, but in all cases, collection and disposal of garbage and refuse must be considered. More detailed information is contained in FM 5-35, FM 21-10, and TM 5-634.

d. In the theater of operations (TO), engineers have the responsibility to locate suitable surface/subsurface water sources (AFCS Series 841XX-842XX) to support the force. When inadequate surface water resources exist, engineer well-drilling teams develop subsurface

sources to the point where quartermaster units can draw water from a stove tank, can purify and treat the water to ensure potability, and can distribute water to customer units. Engineers are responsible for providing water at fixed installations. Requirements for water supply are developed to meet the needs of individuals; vehicle utilization; mess operations; and

maintenance, industrial, construction, and hospital operations. Most, but not all, requirements are for potable water. Requirements vary depending on activity and location.

e. The following are general planning factors in gallons per day (GPD):

Consumer	Rate of Consumption Temperate-Cold/Desert-Jungle	Remarks
Individual	3 to 6 GPD/man	
Installations		
Camp (initial) w/bath	25 to 50 GPD/man	Incl waterborne sewage
Camp (temporary)	100 to 130 GPD/man	Incl waterborne sewage
Vehicles		
Tactical	½ to 1 GPD/veh	
Locomotive (steam)	200 GPD/train mile	
Support facilities		
Hosp	200 GPD/bed	
QM bakery co	2,600 GPD	20 hr op
QM laundry co	64,000 GPD	20 hr op
QM clothing exchange and bath co	360,000 GPD	20 hr op
400-gal decon (approx)	4,000 GPD	20 hr op
Const equip		
Rock crusher, 75 TPH	22,500 to 45,000 GPH	Nonpotable, clean
Rock crusher, 225 TPH	10,000 to 200,000 GPH	Nonpotable, clean
Concrete mixer, 16S	(560/140) GPH ¹	
M919 concrete mobile	(6480/1620) GPH ²	
Central concrete mix plant, 112S	(3600/1200) GPH ²	
Water distr	10,000 G/km/single-lane road	
	under const	Nonpotable, clean
Port-deep draft berth	50,000 to 100,000 GPD	
Storage	Total rqmts x .5	Incl fire protection

FOOTNOTES:

¹When used with wash/screen unit.

²Figure represents potable water requirements for actual concrete production/nonpotable (clean water requirements for cleaning of equipment; sum of two figures if only potable water is used).

f. Data pertaining to the water purification and treatment capabilities of quartermaster units are in Chapter 2. General planning factors applicable to water treatment and storage are as follows:

Category	Facility	Criteria
84110	Water Treatment Plant	75 GPD/Man
84120	Water Storage	37.5 GPD/Man

1-25. ROAD CONSTRUCTION (AFCS Series 85110 and 85130).

a. Construction and maintenance of road nets in a TO are held to the minimum required by the situation and are based on maximum use of the existing road nets. Normally, the minimum two-lane road nets to be provided and maintained are as follows:

(1) In the combat zone —

(a) Two earth roads per division forward of division rear boundary.

(b) Two improved (for example, gravel and crushed rock without asphalt treatment) roads per corps forward of corps rear boundary.

(c) Lateral improved roads at 16-kilometer intervals in rear of division rear boundary.

(d) Access roads, as required, at depots, supply points, and other installations in corps rear area.

(2) In the communications zone —

(a) Two bituminous-surface-treated roads to each corps rear area; connecting roads, as required, to ports and beaches.

(b) Access roads, as required, at depots and other installations in the communication zone.

b. Construction of new roads include the following:

(1) New road construction is undertaken only when it is absolutely necessary and normally includes only such items as access roads and detours to bypass obstacles. The factors in Tables 1-38 through 1-42 are given primarily for estimating rehabilitation as a percentage of the requirements for new construction. Detailed planning factors for construction of all road facilities are found in TM 5-301, TM 5-302, and TM 5-303.

(2) For planning purposes, one kilometer of new road requires 7.5 meters (24.8 ft) of bridging and from 3.7 culverts in flat terrain to 13 culverts in mountainous terrain.

(3) Material requirements for one kilometer of new road (including bridges and asphalt for surfacing, but not shoulders) are given in Tables 1-38 and 1-39.

Table 1-38. Material Requirements for One Kilometer of New Road¹

Type of Road (AFCS series 85110 and 85130)	Class C		Class A	
	Single Lane 10 ft (3.05m) Wide	Double Lane 24 ft (7.3m) Wide	STON	MTON ²
Earth, graded and drained, rolling moderate rock, grass	2.5	1.9	3.1	2.9
6" (152mm) stabilized earth or stone (does not include culvert)	None ³	None ³		
1" (25mm) cold surface treatment on 6" (152mm) stabilized stone	17.6	24.2	39.0	54.3
1" (25mm) surface treatment on existing primed base	13.7	18.6	26.7	37.3
2" (51mm) cold road mix, cold laid asphalt on 6" (152mm) primed stabilized stone	61.4	85.5	119.0	166.2
3" (76mm) cold road mix, cold laid asphalt on 6" (152mm) primed stabilized stone	86.8	120.9	166.8	232.2

FOOTNOTES:

¹Does not include aggregates — AFCS stipulates that aggregates will be locally procured. Includes culvert material and asphalt in drums (55 gal).

²MTON = 40 cu ft.

³No material requirements; mechanical stabilization only.

Table 1-39. Gravel or Crushed Rock Requirements for One Kilometer of New Road

Type of Road	Class C			Class A		
	Single-Lane 10 ft			Double Lane 24 ft		
	(3.05m) Wide			(7.3m) Wide		
	cu yd	(cu m)	STON ¹	cu yd	(cu m)	STON ¹
Earth, graded and drained, rolling, moderate rock, grass		None			None	
6" (152mm) stabilized earth or stone	1091	(847)	1910	1940	(1483)	3395
1" (25mm) surface treatment on 6" (152mm) stabilized stone	822	(529)	1438	1524	(1165)	2667
1" (25mm) surface treatment on existing primed base	822	(629)	1438	1524	(1165)	2667
2" (51mm) cold road mix, cold laid asphalt on 6" (152mm) primed stabilized stone	955	(761)	1741	1768	(1352)	3093
3" (76mm) cold road mix, cold laid asphalt on 6" (152mm) primed stabilized stone	1131	(865)	1979	2011	(1538)	3519

FOOTNOTE:

¹Based on 1.75 STON/cu yd; for compacted thickness add 25 percent.

(4) Table 1-40 shows the net effective manhours and surfacing one kilometer of new one lane road (10 ft (3.05 m) traffic lane plus 4 ft (1.2 m) shoulders). Man-hour efforts for bridging and culverts are not included.

Table 1-40. Construction Effort in Man-Hours for One Kilometer of New Road¹

Terrain	10 ft (3.05 m) single lane plus 4 ft (1.2 m) shoulder				24 ft (7.3 m) double lane plus 4 ft (1.2 m) shoulders			
	Grading Only	Grading and 6" (152 mm) Gravel	Grading and 6" (152 mm) gravel, 3" (76 mm) Hot Mix Asphalt Concrete	Grading Only	Grading and 6" (152 mm) Gravel	Grading and 6" (152 mm) gravel, 3" (76 mm) Hot Mix Asphalt Concrete	Grading Only	Grading and 6" (152 mm) Gravel
Swamp, avg 4 ft fill, no vegetation	1115	1366	1822	1650	2116	3073	2616	2971
Flat prairie, avg vegetation, 0 to 20 percent rock ²	1329	1451	1702	1954	2171	2616	2971	3073
Rolling, avg vegetation, 0 to 20 percent rock	1482	1623	1914	2173	2453	2971	3073	3073
Hilly, forested, 0 to 20 percent rock	4071	4287	4731	5878	6269	7071	10649	13527
Mountain, forested, no rock	5868	6336	7300	7986	8859	10649	13527	16611
Mountain, 0 to 20 percent rock	7545	8113	9077	10864	11737	13527	16611	16611
Mountain, over 20 percent rock	9388	9856	10820	13948	14821	16611	16611	16611

FOOTNOTES:

¹See TM 5-301, TM 5-302, and TM 5-303 for more detailed manhour and equipment hour estimates. Bridging and culverts are not included.
²This is the base data line.

(5) Table 1-41 provides fixed-bridge superstructure requirements for one kilometer of road, based on 7.5 meters (24.8 ft) of bridging per kilometer of route and on average percentages of the various types of stan-

dard military bridging spans. Timber ridge data are based on typical timber bridging with 4.6 meter (15 ft) wood stringers (TM 5-312). Normally, for gaps

greater than 25 feet, steel stringers will be used. Semi-permanent steel highway bridging is described in TM 5-302 and TM 5-312.

Table 1-41. Fixed Bridge Superstructure Requirements for One Kilometer of Road¹

Facility No.	Type of Span (AFCS series 85120)	Percentage	Feet (Meters)	STON	MTON	Manhours
85120AM	Road bridge, timber stringers 18 ft span CL 60	20	4.9 (1.5)	4.1	6.3	56.4
85120AJ	Road bridge, steel stringers, 40 ft span, CL 60	21	5.1 (1.57)	6.9	9.2	51.0
85120AE	Road bridge, steel stringers, 60 ft span CL 60	24	5.9 (1.80)	9.9	10.5	75.0
85120FR	Steel substructure tower, 20 ft high			0.9	0.83	9.2
85120GL	Substructure, concrete footings on steel piles	12	3.0 (0.90)	1.5	1.2	8.2
85120AE	Road, bridge, steel stringers, 60 ft span (figure adjustment)			5.1	5.4	38.2
	Total			7.5	5.43	55.6
85120FR	Steel substructure tower, 20 ft high			0.5	0.5	5.5
85120GL	Substructure, concrete footings on steel piles			0.9	0.7	4.9
85120AE ²	Road, bridge, steel stringers, 60 ft span (figure adjustment) (120 ft)	11	2.7 (0.83)	4.5	4.8	34.3
	Total			5.9	6.0	44.7
85120FR	Steel substructure tower, 20 ft high			0.6	0.53	5.8
85120GL	Substructure, concrete footings on steel piles			1.0	0.77	5.2
85120AE ²	Road, bridge, steel stringers, 60 ft span (figure adjustment) (125 ft)	12	3.0 (0.90)	5.1	5.4	38.2
	Total			6.7	6.7	43.4

FOOTNOTES:

¹Except where noted, requirements do not include substructure. All bridges are double-lane and have timber decking and walkways with handrail.

²AFCS longest span is 60 feet. Basic 60 feet set data extrapolated to fit long bridge requirements.

c. Materials and efforts required to rehabilitate roads after action, in percentages of the materials and effort required for new construction, are shown in Table 1-42.

d. After rehabilitation, and allowing for fair wear and tear but no additional damage in action, suitably trained and equipped engineer troops maintain one kilometer of roads based on the following general planning factors (AFC Series 85140):

e. A general planning factor of 50 square yards per vehicle for unit hardstand and maintenance area (AFCS Series 85210) provides hardstand parking for unit vehicles and trailers and a maintenance area for individual and organizational maintenance requirements.

Table 1-42. Rehabilitation—Equivalent Percentages

Rehabilitation of —	Equivalent Percentages of New Construction	Net Effective Effort Manhours Per Km Per Day
Roads	10 to 20	
Culverts	15	
Bridges	50 to 90	
	Type of Road	Single Lane Double Lane
	Earth, graded and drained	1.7 3.8
	Bituminous surface, cold patch	2.1 2.4

1-26. RAILWAY CONSTRUCTION (AFCS Series 860XX).

a. The railroad divisions used in planning include 160 route kilometers of main line, single or double

track, together with its terminal operating and maintenance facilities; fueling and watering facilities, as required; and necessary signaling equipment or interlocking facilities for safe operation. Passing sidings on single-track lines and at stations and/or crossovers at double-track lines and stations are at intervals as required by the traffic. Normally, at least one spur or siding is provided at each station. Materials and manhours (net effective) required for new construction of one kilometer of standard-gauge (1.435 m (4 ft 8½ in)), single-track railroad, is shown in Table 1-43. Grading includes clearing based on average wooded terrain. Ballast is supplied from bank-run material, and the average haul is five kilometers.

Table 1-43. Construction Requirements for One Kilometer of Standard-Gauge Railroad

Item	STON	MTON	Man Hours
Grading	—	—	3,100
Ballast delivered	—	—	1,550
Track laying and surfacing	—	—	2,100
Bridging-13.25 m per km	79	68.9	2,000
Culverts-4 per km-avg	5	4.3	870
12-m length	62.9	125.8	—
Ties-1885	102	44.8	—
Rail-90 lb.	—	—	—
Fastening (based on 11.9-m rail)	11.8	3.5	—
Total	260.7	234.4	9,620

b. Table 1-44 reflects the rehabilitation requirements that can be expected for a 100-kilometer standard-gauge, single-track line extending inland from a port, using average percentages of demolition over the entire line. FM 55-20 and TM 5-370 provide further information.

1-27. INSTALLATION CATEGORIES.

a. AFCS places installations in the following categories:

Description	Category	
Administration	AA	POL Fuel Drum Cleaning, Filling and Storage
Airfield and Heliports	AG	POL Pipeline
Camp, PW	PW	POL Tactical Marine Terminal
Camp, Troop	NT	POL Tank Farm, Bulk Storage
Field Fortification (Minefields)	CB	POL Tank Farm, Complex
Hospital	GH	POL Tank Truck/Car
Maintenance, Vehicle	MT	Loading/Unloading
Marine, Railway Repair	FP	Port, Break-Bulk Cargo
Marine, Terminal POL	PA	Post Office
Military Prisoner Stockage	ND	Railroad, Regulating Station
Ordnance, Armament Rebuild Ship, Parks, and Collection Point	JA	Railroad Terminal
PECS (Containerized Supplies)	YY	Recreation Center
		Storage, Ammunition
		Storage, Dry Cargo
		Storage, Dry Cargo

Each installation is further identified by four numerals following the alpha characters listed above. The complete code is used to identify the corresponding construction drawing in TM 5-302.

Table 1-44. Rehabilitation Requirements for 100 Kilometers of Railroad

Item	Quantity Per 100 km	Demolition Percentage	Amount of Rehabilitation	Materials ¹ STON	MTON	Manhours ¹ (thousands)
Main line	100 km	13	13 km	2,767	1,936	42.3
Port trackage ²	3 km	100	3 km	834	670	13.7
Passing sidings ²	4.5 km	80	3.6 km	1,003	806	10.6
Station sidings ²	3 km	80	2.4 km	669	535	7.4
Railway terminal ^{2,3}	1 each	75	75 percent	4,410	4,230	100.0
Water stations	2 each	100	2 each	84	131	5.6
Fuel station	1 each	100	1 each	13	11	0.6
Bridging	1,325 m	70	929 m	5,530	4,830	140.0
Culverts	5,300 m	15	797 m	74	65	13.0
Grading						21.8
Ballast						27.4
Total				15,384	31,214	382.4

FOOTNOTES:

¹Tunnels require special consideration. To repair (by timbering) a 15 m demolition at each end of a single-track tunnel (30 m total per tunnel) allow 70 STONs, 87 MTONs, and 3,000 manhours.

²Estimate includes ties, rails, fastenings, turnouts, and track laying and surfacing. It assumes ballast is available at workites.

³Includes replacement of buildings 100 percent, ties 30 percent, and rail and turnouts 85 percent.

b. The following data are representative requirements for administrative installations:

Installation #	Type	Site Requirements (acres)	STON ¹	MTON ²	Construction ³ Effort (mh)
AA1031	25,000 sq ft, office/technical space for 312 personnel, metal frame	6	468	895	29,946
AA1111	50,000 sq ft, office/technical space for 625 personnel, metal frame	13.9	814	1,346	56,055

FOOTNOTES:

¹For wood frame increase by 60%.

²For wood frame decrease by 7%.

³For wood frame increase by 3%.

c. The following data are representative requirements for airfield/heliport installations.

Installation #	Type	Site Requirements (acres)	STON	MTON	Construction Effort (mh)
AG0331	Heliport, Army, 25 aircraft of helicopter (med) transportation company support area	123	18,268	14,703	46,994
AG1331	Heliport, Army, 27 aircraft of air cav troop support area	65	6,738	5,669	27,984
AG3331	Heliport, Army, 37 aircraft aviation co (corps) support area	84	8,124	6,821	30,620

d. The following data are representative requirements for aircraft parking and maintenance installations:

Installation #	Type	Site Requirements		Construction	
		(acres)	STON	MTON	Effort (mh)
AG4331	Aircraft parking and maint, collocated with Air Force airfield, spt, 18 acft, support area	24	5,770	4,816	11,945
AG5041	Runway, Army, C-130 rear area, min facilities	22	34,147	27,866	44,506

e. The following data are representative requirements for prisoner of war camps:

Installation #	Type	Site Requirements		Construction ³	
		(acres)	STON ¹	MTON ²	Effort (mh)
PW0051	500 man, steel frame	18	618	1,608	34,155
PW0101	1000 man, steel frame	23	1,061	2,999	64,873
PW0151	2000 man, steel frame	40	1,978	5,857	116,986

FOOTNOTES:

- ¹For wood frame, increase by 75%.
²For wood frame, decrease by 26%.
³For wood frame, increase by 8.5%.

f. The following data are representative requirements for troop camps:

Installation #	Type	Site Requirements		Construction ³	
		(acres)	STON ¹	MTON ²	Effort (mh)
NT1611	250 man steel frame	7.7	1,209	1,231	24,805
NT2611	500 man, steel frame	16	2,239	3,439	43,385
NT3611	1000 man, steel frame	41	4,823	6,753	81,743
NT4611	1500 man, steel frame	51.4	6,577	10,068	114,392
NT5611	3000 man, steel frame	104.7	12,842	19,938	226,728

FOOTNOTES:

- ¹For wood frame, increase by 20%.
²For wood frame, increase by 26%.
³For wood frame, increase by 6%.

g. The following data are representative requirements for hospital installations:

Installation #	Type	Site Requirements		Construction ³ Effort (mh)	
		(acres)			
GH0151	100 bed steel frame	10.1	STON ¹ 1,073 MTON ² 1,677	70,602	
GH0251	200 bed, steel frame	13.6	1,471	2,283	102,794
GH0551	500 bed, steel frame	24.6	2,839	4,642	185,452
GH1051	1000 bed, steel frame	38.6	4,361	7,487	271,084

FOOTNOTES:

¹For wood frame, increase by 48%.

²For wood frame, increase by 3%.

³For wood frame, increase by 2%.

h. The following data are representative requirements for maintenance installations:

Installation #	Type	Site Requirements		Construction Effort (mh)
		(acres)		
MT1021	Organizational, 6 Bay	1,183	1,579	11,579
MT1041	Organizational, 8 Bay	1,367	1,891	12,899
MT1061	Organizational, 10 Bay	1,480	2,039	13,605
MT1121	Direct Support, 8 Bay	1,745	2,519	17,324
MT1141	Direct Support, 12 Bay	2,356	3,864	21,962
MT1161	Direct Support, 18 Bay	3,685	5,876	43,510

i. See TM 5-343 for descriptions, sizes, and operating characteristics of pipeline equipment, AR 701-5 for supply service responsibilities; and TM 10-1100 series for petroleum pipeline and terminal operating procedures and techniques. Engineer troop units construct petroleum distribution systems. Quartermaster units provide the hardware. A complete pipeline system includes —

- Tanker discharge facilities and receiving tank farm at a port or beach (marine terminal).

• One or more parallel pipelines with pumping stations spaced along the lines as directed by the hydraulic design.

• Tank farms which generally are spaced from 80 to 120 kilometers apart along the system and vary from 50,000 to 1,000,000 barrel capacity, depending on supply needs and specified theater levels of supply.

- Dispensing facilities which are provided at tank

farms and supply points.

Lightweight pipe — 4", 6", and 8" diameter — is standard for military pipeline systems. On level terrain, pump stations are spaced 20 miles (32 km) apart for 4", 6", and 8" lines. When a wharf or pier with marine docking facility is not practical, submarine ship-to-shore lines are used and consist of 8" heavy-welded lines and 12" to 16" and 20" concrete-coated lines running from the offshore tanker mooring to the receiving tank farm. These pipelines are constructed by the Corps of En-

engineers as part of the equipment in marine terminal installation. For general planning, the pipeline capacities given for standard military lightweight tubing in Table 1-45 may be used. Table 1-46 provides POL products pipeline construction requirements. Although military lightweight steel tubing ordinarily

forms most of the length of a pipeline, it normally is not buried, nor is it used for submerged stream crossings or in populated areas and locations where hazards of fire and damage are acute. Lightweight tubing is not used where excessive static and dynamic overpressure conditions would exist. In situations where lightweight

tubing is unsuitable standard-weight, commercial-type (APD) line pipe is the selected military standard for use in petroleum pipelines. TM 5-343 contains detailed information and data on pipeline equipment and a discussion of pertinent pipeline planning considerations where deliberate planning and estimates are needed.

Table 1-45. Capacity of Standard Military Lightweight Steel Tubing

Nominal Tubing Size (in)	Inside Diameter or Line (in)	Nominal Design Capacity (bph)	Emergency Capacity (bph)	Safe Working Pressure (psi)	Maximum Working Pressure (psi)	Barrels ¹ Per Day		Gallons ¹ Per Day		Net STON Per Day ²
						Per Day	Per Day	Per Day	Per Day	
4	4,350	355	393	600	750	14,910	298,000	910		
6	6,415	785	1,000	600	750	32,970	660,000	2,000		
8	8,415	1,355	1,730	500	625	56,910	1,140,000	3,480		
12	12,481	7,150	11,400	400	500	300,000	6,000,000	18,300		

FOOTNOTES:

¹Computed at nominal design capacity, using an average operating day of 20 hours.

²Average of all products.

Table 1-46. Petroleum, Oils, and Lubricants Pipeline Construction Requirements

Installation #	Type	Site	STON	MTON	Total
		Requirements (acres)			Manhours
PD1019	4 inch, 8 mi length, 355 bph pump	97 acres	187	218	4,784
PD1029	6 inch, 17 mi length, 785 bph pump	206 acres	590	899	10,594
PD1039	8 inch, 17 mi length, 1355 bph pump	206 acres	728	1,537	11,464
PD1049	POL shore booster station, 6" line, 1800 bph pump	— acres	175	300	6,061
PD1069	POL shore booster station, 8" line, 5400 bph pump	— acres	217	398	7,378
PD1159	POL pipeline pumping station, 8" line, 3600 bph pump	— acres	132	264	5,355
PD1179	POL pipeline pumping station, 10" line, 7200 bph pump	— acres	191	437	6,964

Based on the theater level of supply, the planner determines the tank farm construction requirements. These requirements may vary depending on the desired supply level of petroleum stored in the tank farm. This variation may be from a 30- to 60-day level, depending on the distance of tanker haul and probability of tanker losses through enemy action. Table 1-47 provides representative data for estimating tank farm construction along a pipeline system. These data include the tanks, pipe manifolds to the individual tanks, pumps, valves, and other equipment necessary for the operation of the tank farms. Current doctrine for dispersion of facilities prescribes that not more than 250,000 barrels of bulk storage capacity will be constructed within 6.5 kilometers of another tank farm. Marine terminals listed in the table are used at ports or beaches and include the receiving tank farm and all facilities for mooring tankers offshore and pumping petroleum products to the tank farm.

j. Requirements for approximate planning factors for materials and manhours for port construction include the following:

(1) Table 1-48, based on data in TM 5-301 and TM 5-360, shows the material and manhour requirements for the construction of new water terminal facilities for the handling of up to 1,440 STONs of discharge dry cargo per day in a 20-hour operation. The facilities include ship or lighter wharf space (150m x 27m), access road from wharf to road net, and minimum covered and open storage. TM 5-301 also contains the detailed installation data breakdown by facility components.

(2) Almost all modern shipping is done by container-ship. New information concerning construction requirements for container piers is being developed and will be included in TM 5-301. Use of container-ship will reduce covered storage requirements.

Table 1-47. Representative Marine Terminal and Petroleum, Oils, and Lubricants Tank Farm Construction Requirements¹

AFCs #	Installation	Capacity (tbb)	Site Area (acres)	STON	MTON	Manhours
PA 1145	Marine tml, with submarine pipeline	200,000	60	891	2,640	49,920
PA 1095	Marine tml, with jetty	200,000	60	1,271	2,886	57,336
PA 1045	Marine tml, with existing dock ²	200,000	60	621	2,209	48,090
PA 1089	Tank farm, with 6" pipe and accessories ²	100,000	23	197	739	21,196
PA 1119	Tank farm, with 8" pipe and accessories ²	200,000	31	292	1,207	37,581

FOOTNOTES:

¹Refer to the TM 5-30 series for construction requirements for all AFCS marine terminals and tank farms. Data shown may be multiplied by appropriate requirement factor for HASTY planning purposes only.

Table 1-48. Port Construction Requirements

	5-ft Tide			15-ft Tide			25-ft Tide		
	Total	Man-	hours	Total	Man-	hours	Total	Man-	hours
Port, break-bulk cgo, temp const, steel frame, 1440 TPD, AFCS series FPI0XX	13,692	12,271	108,620	14,172	12,478	109,010	14,992	13,581	121,840

FOOTNOTES:

¹Wood frame facilities similar; however, increase erection times by 7 percent.

(2) Almost all modern shipping is done by container-ship. New information concerning construction requirements for container piers is being developed and will be included in TM 5-301. Use of container-ship will reduce covered storage requirements.

(3) Table 1-49 shows the material and manhour requirements for the rehabilitation of a 500 foot (153m) deep-draft wharf, clearance of debris, and new construction of other terminal facilities for up to 1,000 STONs per day. This includes repair of cratered wharf faces by timber and V-trestle construction to a new width of 60 feet (18m).

(4) Table 1-50 shows the material and manhour requirements for the rehabilitation of a 500 foot

(153m) lightertage wharf, clearance of debris, and new construction of other port facilities for up to 1,500 STONs per day. This includes repair of cratered wharf faces by timber or steel-sheet pile.

(5) Normally, one engineer combat heavy company constructs 150 meters of deep draft marginal wharf, or equivalent, in six days. These rates cannot be improved by using a force larger than a company on one wharf structure of this size because of the

sequences necessary in pile driving, capping, bracing, and deck construction. Table 1-51, based on experience factors in the invasion of development harbors, indicates the average percentages of demolition to be anticipated. Additionally, the removal of sunken wrecks or blockships may be required, normally 2 or 3 in a small harbor, 10 to 20 in a large one. If the harbor entrance is narrow, it usually is found blocked.

Table 1-49. Rehabilitation, (30 × 500 ft) Deep-Draft Wharf and Ancillary Facilities

Item	STON	MTON	Manhours
Repair of 30 ft × 500 ft deep water wharf, repair scheme 1	1,653	1,453	25,200
1-mile, two-lane, access road, 3-in hot-mix sand asphalt on existing base	90	123	2,060
2.0 mile railroad, single-track without turnouts	292	299	6,566
Turnout, railroad track, no. 8 std gage	6	13	314
Steel frame warehouse, with interior (12,000 sq ft) 1,214.8 sq m	64	71	2,682
Open storage site preparation per acre (4,047 sq m)			168
Clearing debris			2,500
TOTAL	2,105	1,959	39,510

Table 1-50. Rehabilitation, (35 × 500 ft) Lightertage Wharf, Supported on Timber Piling

Item	STON	MTON	Manhours
Repair of 35 ft × 500 ft lightertage wharf	1,308	1,117	11,960
1 mile, two-lane, access road, 3-in hot mix sand asphalt on existing base	90	123	2,060
2.0 mile railroad, single-track without turnouts	292	299	6,566
Turnout, railroad track, no. 8 std gage	6	13	314
Steel frame warehouse, with interior (12,000 sq ft)	64	71	2,682
Open storage site preparation per acre (4,047 sq m)			168
Clearing debris			2,500
TOTAL	1,760	1,633	26,250

Table 1-51. Average Demolition of Existing Port Facilities

Facility	Average Demolition
Permanent wharves or quays	30 percent very badly damaged; early repair impracticable
	30 percent heavily damaged; much debris; reasonably early repair possible
	40 percent lightly damaged; less debris; early repair practicable
Port cranes	100 percent destroyed
Port warehouses	50 percent to 100 percent destroyed

(6) Utilities required at ship wharves include the following:

- Normally, fresh water for ships is piped to the first deep-draft berth made available, based on a minimum flow of 100,000 gallons per day, and supply pipes are extended to other berths as may be required to avoid delaying ships. Required wharf utilities usually include a minimum storage facility equal to one-half the required daily demand stored in two equal-capacity tanks; that is, 50,000 gallons stored in two 25,000-gallon tanks, provided with 4-inch pipes and suitable connections. One 4-inch pipeline with three 1½ inch outlets refills 115,000 gallons in 6 hours.

- Electricity on wharves is used principally for floodlighting. Five-hundred-watt incandescent lamps, mounted 35 feet above the wharf deck and spaced at intervals of 115 feet, provide adequate illumination averaging 1- to 2-foot candles.

(7) Construction factors for specific types of marginal lighterage wharves per 100 feet are illustrated in Table 1-52.

(8) A floating wharf can be constructed 6 pontoons wide by 72 pontoons long (42 ft by 32 ft) or 400 ft, with four approaches, each 4 pontoons wide by 18 pontoons long (28 ft by 108 ft). Total area of wharf and approaches is 30,700 square feet. The construction fac-

tors are as indicated in Table 1-53.

(9) Construction requirements for over-the-beach discharge of cargo include the construction of ramps, hardstands, egress roads, and beach stabilization. Generally, local materials are used. The length of the ramps varies, depending on beach gradient and tidal range. Use the following formula:

$$\text{Beach gradient} \times (\text{tide range (m)} + 1.2) = \text{ramp length (m)} \quad (\text{m per 100m})$$

The manhours required for construction of 30 meters of various types of ramps, hardstands, and beach stabilization are shown in Table 1-54.

Table 1-52. Construction Factors, Lighterage Wharf

Type of Construction	STON	MTON	Manhours
Timber pile, 35 ft wide, using 12-in piles	171	228.0	2,400
Timber crib, supporting timber bents, 35 ft wide	143	193.0	2,800
Timber retaining wall (Wakefield pile) with earth or rubble fill	21	30.5	1,300
Steel sheet-piling retaining wall with earth or rubble fill	27	25.0	1,100

Table 1-54. Construction Requirements for Over-the-Beach Discharge of Cargo^{1, 2}

Facility	Manhours
Amphibious vehicle ramp, 55 ft wide by 100 ft long by 1.5 ft deep	930
Landing craft ramp (LCU/LCM/LST), 30 ft wide by 100 ft long by 1.5 ft deep	480
Hardstands and beach stabilization, 100 ft wide by 100 ft long by 0.5 ft deep	555
Maintenance:	—
Ramps: 10 percent of initial effort per month	—
Hardstands and beach stabilization: 10 percent of initial effort per quarter	—

FOOTNOTES:

¹See paragraph 1-25 for road construction factors.

²The increased use of containerhips will cause an increase in hardstand requirements.

Table 1-53. Construction Factors, Floating Pontoon Wharves

Floating Pontoon Wharves	STON	MTON	Manhours
Per 1000 sq ft	42	127	343
Wharf and approaches, as above 1,290	3,900		10,535
30,700 sq ft			

(10) Dredging of harbors is a slow operation and should be avoided in military operations, when possible. Likewise, plans should not call for dredging near quay walls because of the danger of damaging foundations. Generally, demolition debris can be cleared

in front of berthing sites by using dragline or clamshell cranes. If dredging of harbor areas is unavoidable, the overall planning factor in Table 1-55 may be used as a guide. Dredging quantities vary considerably with the type of equipment used, the distance of

haul to the spoil area, the method of haul, and the kind of material being excavated (e.g., sand, mud, gravel, soft rock or coral, hard rock). Large capacity shovels with clamshells or draglines may be mounted on barges and floated to the site.

Table 1-55. Dredging Planning Factors

Item	Hydraulic Suction ¹	Dipper	Clamshell or Orange Peel	Seagoing Hopper ²
Size	12- to 28-in pipe	2.0 to 15.7 cu yd	1.3 to 10 cu yd	500 - 8150 cu yd
Operating personnel	Varies from 12- to 90-man crews, depending on size of dredge and number of shifts being worked			
Operating characteristics and principal use	Best in soft or loose material, but can also dig firmer material, varying from compacted sands and conglomerates to some types of coral	Loose rock, clay hardpacked conglomerate, and excavation; can also be used to dredge the type of material which hydraulic suction dredges excavate, but at lesser efficiency; generally requires loading in scows for disposal	Dredging in limited areas, caisson work, debris clearance; generally requires loading in scows for disposal; the material dredged is of the softer type, such as silt and mud	Operates in areas exposed to open sea conditions; operates most efficiently in free-flowing materials, such as loose sands, muds and silts
Maximum swells affecting operations	3 ft (0.9m)	2 ft (0.5m)	5 ft (1.5m)	Designed for dredging in rough water
Maximum dredging	25-65 ft (7.6-19.8m)	20-50 ft (6.0-15.2m)	Great depth	36-60 ft (11.0-18.2m)
Average daily capacity ³	4,000 cu yd (3000 cu m), 12-in pipe	1,900 cu yd (1500 cu m), 2.0 cu yd (1.5 cu m) dipper cu yd	590 cu yd (450 cu m), 1.3 cu yd (1 cu m) clamshell or orange peel	19,600 cu yd (15,000 cu m) (15,000 cu m)
	26,100 cu yd (20,000 cu m) 28-in pipe	9000 cu yd (6900 cu m), 15.7 cu yd (12 cu m), dipper	4200 cu yd (3200 cu m) 10 cu yd (7 cu m) clamshell or orange peel	19,600 cu yd (15,000 cu m) 8150 cu yd (6230 cu m) hopper cu yd)

FOOTNOTES:

¹Disposal is by pipeline to upland disposal areas or in water areas a sufficient distance from the dredge areas to prevent significant infill.

²Hopper dredges are used primarily in dredging inlet channels leading from exposed offshore areas to a sheltered harbor. In a military operation, it is probable that all other dredging will be accomplished with local dredges.

³Based on 24-hour operation at 60-percent effective time.

k. The following data are representative requirements for ammunition storage installations:

Installation #	Type	Site Requirements	STON	MTON	Construction Effort (mh)
DA1051	Storage, ammo, 15,000 ton, COMMZ, wood frame	3,300 acres	1,249	1,185	48,776

l. The following data are representative requirements for dry storage installations:

		Site	STON ¹	MTON ²	Construction ³
DC1021	Dry cargo, 12,000 sq ft covered, metal frame, no utilities	5.1 acres	326	817	4,932
DC1061	Dry cargo, 25,000 sq ft covered, metal frame with utilities	5.6 acres	668	1,060	8,802
DC1101	Dry cargo, 50,000 sq ft covered, metal frame with utilities	9.8 acres	1,328	2,110	17,160

FOOTNOTES:

¹For wood frame, increase by 28%.

²For wood frame, decrease by 35%.

³For wood frame, increase by 50%.

m. Table 1-56 furnishes data on tentage currently available in the inventory. Tentage offers a rapid means of sheltering personnel and equipment with

minimal requirements for construction materials. When resources are available and the situation

warrants, a greater degree of permanence can be provided by pouring concrete floors.

Table 1-56. Tentage Data

LIN #	Type of Tent	Length	Width	Height	Floor Area (sq ft)	Weight Packed (lb)	Volume Packed (cu ft)
V46797	Tent, Aerial Cable Splicers	5'	4'	8'2"	20	116	7.9
V52414	Tent, Missile System Equipment Console: Maint Missile Test Shop	6'	8'10"	Front 5' Rear 8'7"	40	50	3
V52551	Tent, Missile System Equipment Console: Pulse Acquisition, Radar, Front	6'8"	8'	Front 6'	40	50	4
V52688	Tent Missile System Equipment Console: Pulse Acquisition Radar, rear	4'	8'	Front 5' Rear 8'7"	26	40	3.5
V52825	Tent, Missile System Equipment Console: Range only Radar Cont Wave	6'9"	8'3"	Front 2'5" Rear 8'3"	55.7	60	4

V50251	Tent, Missile System Equipment Console, High Power Illum Radar, rear	3'8"	9'4"	Front 3'9" Rear 9'2"	34	125	13.065
V50280	Tent, Missile System Equipment Console, High Power Illum Radar, Front	5'9"	8'7"	Front 3'4.5"; Rear 8'8.5"	49.4	150	15
—	Tent, Frame Type Universal Field Maint Exp (8340-00-935-6372)	64' (8' Inct)	27'	22'	1,728	Tent: 1,096 Frame: 1,957 Liner: 323 Anchoring System: 180	Tent: 67 Frame: 181.2 Liner 23.46 Anchoring System: 3.1
V79610	Tent, Ext, Modular, Personnel	16'	20'	10'	320	1,096	100
V79611							
V79615							
V79612	Tent, Ext Modular, Personnel	48'	20'	10'	960	2,664	264
V79613							
V79614							
V48030	Tent, Frame-Type, Insulated, Sectional	Tent: 16' Vestibule: 3'10"	Tent: 16' Vestibule: 3'1"	Tent: 8' Vestibule: 6'6"	Tent: 256 Vestibule: 11	2410	259.5
V48510	Tent, Frame-Type, Exp, Lightweight	40' (8' Inct)	20'	14'	640	380	38.4
V49263	Tent, Hatch Type, Cotton	36'	30'	(flat canvas cover used to cover hatches)	556.0	556.0	54.0
V49400	Tent, Hatch Type, Cotton	36'	40'	(flat canvas cover used to cover hatches)	571.0	571.0	5.4
V50770	Tent, Observing Astronomic, Rectangular	9'4"	6'9"	7'10"	62.6	196	12
V51455	Tent, Frame-Type Maint Tent Expansion Assy	32' (8' Inct) Canvas: 26'	20'	14' (No manual) Exp: 5'4" to 8'8"	640 (Expandable)	220 209	21 11.8
V53921	Tent, Vehicle Maint						
V47071	Tent, Arctic, 10-Man	6 sides (8'9" EA)	17'6"	8'6"	198.6	76	7.3
V47208							
V47345	Tent, Assembly	80'	40'	18'	2,856.6	1,755	100
V48578	Tent, GP Large	52'	18'	12'3"	936	Tent: 665	69
V47815						Liner 155	
V78784						Tent: 534	33
V48852	Tent, GP, Medium	32'8"	16'	10'	512	100	
V48921							
V48989							

Table 1-56. Tentage Data — (Cont'd)

LN #	Type of Tent	Length	Width	Height	Floor Area (sq ft)	Weight Packed (lb)	Volume Packed (cu ft)
V49058	Tent, GP, Small	6 sides	17'6"	10'6"	198.9	Tent: 163 Liner: 23	3.8
V49126		(8'9" ea)					
V49143							
V49537	Tent, Hexagonal	6 sides	13'3"	8'6"	113.2	56	3.8
V49674	Lightweight, M1950	(6'7" ea)					
V49811	Tent, Kitchen	18'	12'	Stack 12' Service Section 9'	216	420	26.2
V49948	Flyproof M1948						
V50359	Tent, Mountain 2-Man	6'10"	14'6"	3'7"	30.75	9.5	.7
V48441	Tent, Frame-Type Maintenance, Medium, Light Metal	32'	20'	14'	640	Tent: 1,798 Liner: 222	Tent: 62 Liner: 222

SECTION VI. TOPOGRAPHY

1-28. TOPOGRAPHIC OPERATIONS. Topographic operations include those tasks which provide organizations with timely and accurate terrain information. This information allows the commander to visualize the battlefield and use the terrain to maximum advantage. Engineer organizations fulfill topographic support requirements by providing terrain analysis, special terrain products, and map distribution.

1-29. TOPOGRAPHIC SERVICES AND PRODUCTS.

a. Topography is the study of natural and manmade features and their effect on mobility, counter-mobility, and survivability. Three topographic functions are — 1) terrain analysis, 2) production (cartography, reproduction and topographic survey), and 3) storage and distribution. The Defense Mapping Agency

(DMA), U.S. Army Engineer Topographic units, and Army Quartermaster units share responsibility for topographic support to Air-Land Battle forces. Topographic products are divided into standard/conventional products and expedient/rapid response products.

b. The DMA standard products are found in the DOD, DMA Catalog of Maps, Charts, and Related Products. The catalog includes topographic, hydrographic, aeronautical, and classified target material products as follows:

(1) Maps with scales of 1:600,000 and smaller are used for strategic planning. World maps are an example of small-scale maps.

(2) Maps with scales larger than 1:600,000, yet smaller than 1:75,000 are medium-scale maps. The

most common map of this scale is the 1:250,000 Joint Operations Graphic (JOG) series. These maps are used for joint air and ground operations. There are three versions—ground (JOG-G), air (JOG-A), and radar (JOG-R)—but all use the same data base, with special overprints that depict data peculiar to the product.

(3) Maps whose scale is larger than 1:75,000 are large-scale maps. The most common large-scale map is the 1:50,000 scale tactical map. Another large-scale standard product is the city plan at 1:12,500 scale.

c. The expedient or rapid response products are made by the engineer terrain analysis teams found at division, corps, and echelons above corps. These products are made to the needs of the commander and do not have a predetermined format or specification.

d. Normally, topographic products are requested

from the Army map depot within the theater. Theater supplements to AR 115-11 provide specific details and procedures on requisitioning products. Detailed discussions of the types of topographic products and services may be found in FM 21-32, FM 5-146, FM 5-100, and FM 100-5.

e. Topographic product requirements include the following:

(1) The mission, area of influence, and area of interest define a unit's standard map scale requirements. The types of unit map stocks allowed are as follows:

- Required basic load products and area of coverage are determined by the initial General Defense Plan and contingency missions. Twenty percent of a unit's basic load will be the maximum number of maps authorized for planning stocks.

- Operational stocks are those products used on a daily basis and used for training. Units will requisition only one-third of their basic load allowance for operational stocks and only 5 percent of the overlap area quantities will be requisitioned.

- New editions of mapping products will be provided, in appropriate quantities to authorized units, by the DMA in its automatic initial distribution process.

(2) Standard products scale coverage is found in the DOD DMA Catalog of Maps, Charts, and Related Products:

- Part 1 Aerospace Products
- Part 2 Hydrographic Products
- Part 3 Topographic Products
 - Volume I Western Hemisphere
 - Volume II Europe, Africa, and Middle East
 - Volume III Asia, Australia, and the Pacific Islands
 - Volume IV (S) Classified Topographic Maps and Related Products (U)
- Part 4 Air Target Material Products.

The catalog is updated by using a monthly bulletin for each volume. Every six months, a bulletin digest is issued and supersedes the monthly bulletin. Each volume contains the following eight sections:

- Section 1 General Information and Ordering Procedures
- Section 2 World and Small Scale Products
- Section 3 Medium Scale Products
- Section 4 1:50,000 Scale and Larger
- Section 5 1:25,000 Scale and Larger
- Section 6 City Products
- Section 7 Special Products
- Section 8 Country and Series Indexes

(3) Expedient products are made to fulfill a specific request for terrain information. The quantities made or issued depend on the requirements. These products are provided directly to the requestor.

f. The quantities of maps issued to units depend on unit size and whether or not the following conditions exist (most maps are issued prior to and after the battle; few are issued during the battle):

(1) Prebattle. A unit in its area of operations already has its basic load of topographic products of its area. If a new unit (a division) is moved to a new area, then it must be totally resupplied with mapping products of its new area of operations.

(2) Battle. During the battle, there is little requirement for replacement of large quantities of maps; rather, a small issue of maps is required.

(3) Post battle. During the post battle periods, units will reorganize, rearm, and conduct resupply operations. Only those topographic products that are no longer usable will be replaced.

g. Table 1-57 shows the maximum topographic product allowances for various types of units.

Table 1-57. Current Recommended Issue Factors

Type Unit	1:250K	1:50K	Map Catalogs	Type Unit	1:250K	1:50K	Map Catalogs
Tank Bn (M1)				Support Sqdn			
HHC	5	25	1	HHT	9	15	1
Tank Co	5	16	0	Admin Co	3	6	0
Infantry Bn (Mech)				Med Co	5	11	0
HHC	15	30	1	S&T Trp	3	28	0
Rifle Co	5	15	0	Maint Trp	2	12	0
Anti-Armor Co	5	17	0	HHC, Bde	13	29	1
Divisional Cav Sqdn				AG Co	3	5	0
HHT	8	50	1	Finance Co	3	3	0
Cav Troop	6	25	0	DISCOM, HHC	9	15	0
Air Cav Troop	11	11	0	DMMC	3	9	0
Arm'd Cav Rgt	13	15	1	HQ & Lt Maint Co	4	10	0
HHT	12	27	1	Hvy & Fwd Spt Maint Co	1	9	0
Arm'd Cav Rgt	6	24	0	Missile Spt Co	1	13	1
HHT	5	16	0	HQ & Spt Co, Med Bn	4	17	0
Arm'd Cav Trp				HHC, S&T Bn	5	10	0
Tank Co				S&S Co	1	12	0
				Motor Trans Co	1	10	0
Cbt Avn Sqdn				MP Co	2	10	1
HHT	16	26	1	HHC, Sig Bn	3	8	1
Air Cav Trp	11	11	0	Command Op Co	2	7	1
Attack Hel Co	12	12	0	Fwd Command Co	2	11	1
Regt Spt Avn Trp	34	37	0	Sig Spt Op Co	2	22	1
FA Battalion				GSR Co, CEWI Bn	8	10	1
HHB	6	23	2	HHC, Engr Bn	2	7	1
115 Spt Btry	3	5	1	Bridge Co	2	7	0
Svc Btry	3	5	0	HHB, Div Arty	5	37	2
CEWI Co	22	41	1	TAB	14	22	1
Engr Co	3	28	0	MLRS, FA Btry	4	8	1
ADA Btry	7	63	1	Div Avn Co	49	51	0
NBC Co	6	13	0	Trans Actt Maint Co	6	14	0
h. General planning factors are derived from the following guidelines:							
Arm'd Co and Arm'd Cav Trp	1 large-scale map per tank and platoon HQ, plus HQ allowances	Attack Helicopter Company		1 per squad and platoon HQ plus 2 per Co HQ			2 per platoon plus Co HQ
Infantry (Mech) Co	1 per squad leader and platoon plus HQ allowances	Field Artillery Company		1 per aircraft plus commander			Nuclear, Biological, and Chemical Company
Air Cavalry Troop	1 per aircraft plus 1 per Co HQ	Air Defense Company		1 per fire unit, FIST, plus Co HQ			Other Units
		Combat Engineer Company		1 per gun and MANPAD vehicle plus Co HQ			at all levels
				1 per squad and assault bridge section,			1 per platoon leader, commander, staff officers, key personnel

CHAPTER 2

SUPPLY PLANNING DATA

SECTION I. GENERAL CONSIDERATIONS

2-1. INTRODUCTION. This chapter examines supply classes and subclasses, supply requirements estimates, and theater-level supply consumption rates. It presents weights, volume conversion factors, and formats for computing supply requirements. It also provides combat consumption rates, daily equipment usage statistics, basic load guides, and chemical munitions data characteristics. The functions of supply include requisition, procurement, storage, stock control, and distribution of items necessary for the equipment, maintenance, and operation of a military combat force. Supplies include food, water, clothing, equipment, arms, ammunition, fuel, materials, and machinery of all kinds.

2-2. FUNDAMENTALS OF SUPPLY.

a. The supply system must be responsive, efficient, and simple to operate. It must be able to adjust to requirements of supported units and be able to forecast and satisfy fluctuating demands.

b. Combat-essential items must be stocked during peacetime for wartime requirements. This is necessary to ensure an adequate supply capability to sustain operations pending establishment of wartime supply procedures or reestablishment of normal peacetime supply channels.

c. Personnel and facilities are required to receive, store, maintain, and issue supplies. Each level of supply distribution must respond to needs by directing issue, by calling supplies forward for delivery to users, or by placing demands on the higher echelon for action.

d. Automatic data processing equipment (ADPE) is used in supply operations whenever possible. An effective communications system is necessary to compile and transmit supply data and to process management information.

2-3. ESTIMATING SUPPLY REQUIREMENTS.

a. The formulas shown in Table 2-1 are useful in estimating supply requirements when both the strengths to be supported and the desired level of supplies are known. Requirements are stated in short tons (STONS) or in gallons.

b. Table 2-2 is an extract from FM 704-28. It provides definitions of the 10 classes of supply and the sub-classes of supply.

c. Table 2-3 provides theater-level average consumption rates when operating in a temperate zone for each class of supply. These data are for very broad planning and may change depending on the needs of the Army. The factors may vary considerably with the force structure, mission, area of operation, and intensity of combat.

Table 2-1. Estimating Supply Requirements

1. Supply requirements less than Class III bulk.

a. Supply requirements.

$$\frac{\text{Strength supported} \times \text{Consumption rate}^1 \times \text{Supply level (days of supply)}}{2,000} = \text{STON}$$

b. Daily resupply.

$$\frac{\text{Average strength} \times \text{Consumption rate}^1}{2,000} = \text{STON}$$

c. Distribution of daily resupply.

$$\frac{\text{Strength} \times \text{Consumption rate}^1}{2,000} = \text{STON}$$

d. Buildup of supply levels.

$$\frac{\text{End strength} \times \text{Consumption rate}^1 \times \text{End supply level (days)}}{2,000} \quad \text{Minus}$$

$$\frac{\text{Beginning strength} \times \text{Consumption rate}^1 \times \text{Beginning supply level (days)}}{2,000} = \text{STON}$$

e. Storage requirements.

$$\frac{\text{End strength} \times \text{Consumption rate}^1 \times \text{No. of days stored}}{2,000} = \text{STON}$$

2. Supply requirements for Class III bulk.

a. Supply requirements.

$$\text{Strength supported} \times \text{Consumption rate}^2 \times \text{Supply level (days of supply)} = \text{Gallons}$$

b. Daily resupply.

$$\text{Average strength} \times \text{Consumption rate}^2 = \text{Gallons}$$

c. Distribution of daily resupply.

$$\text{Strength} \times \text{Consumption rate}^2 = \text{Gallons}$$

d. Buildup of supply levels.

$$\text{End strength} \times \text{Consumption rate}^2 \times \text{End supply level (days)} \quad \text{Minus}$$

$$\text{Beginning strength} \times \text{Consumption rate}^2 \times \text{Beginning supply level (days)} = \text{Gallons}$$

e. Storage requirements.

$$\text{End strength} \times \text{Consumption rate}^2 \times \text{No. of days stored} = \text{Gallons}$$

FOOTNOTES:

¹Consumption rates are to be expressed in pounds per person per day.

²Consumption rates are to be expressed in gallons per person per day.

Table 2-2. Classes and Subclasses of Supply

- CLASS I — Subsistence, including gratuitous health and welfare items.
- CLASS II — Clothing, individual equipment, tentage, tool sets and tool kits, handtools, administrative and housekeeping supplies and equipment. Includes items of equipment (other than principal items) prescribed in authorization/allowance tables, and items of supply (not including repair parts).
- CLASS III — POL: Petroleum fuels; lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, chemical products, coolants, deicing and antifreeze compounds, together with components and additives of such products and coal.
- CLASS IV — Construction: Construction materials including installed equipment and all fortification/barrier materials.
- CLASS V — Ammunition: Ammunition of all types (including chemical, radiological, and special weapons), bombs, explosives, land mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.
- CLASS VI — Personal Demand Items (nonmilitary sales items).
- CLASS VII — Major End Items: A final combination of end products which is ready for its intended use: principal items; e.g., launchers, tanks, mobile machine shops, vehicles.
- CLASS VIII — Medical material including medical-peculiar repair parts.
- CLASS IX — Repair parts and components including kits, assemblies and subassemblies, and reparable and nonreparable items required for maintenance support of all equipment.
- CLASS X — Materiel to support nonmilitary programs; e.g., agricultural and economic development materials not included in Classes I through IX.
- A — Air (aviation), aircraft, airdrop equipment):
 - (Class I — Food packet, inflight, individual.)
 - (Class II — Items of supply and equipment in support of aviation/aircraft.)
 - (Class III — Petroleum and chemical products used in support of aircraft.)
 - (Class V — Munitions delivered by aircraft or aircraft weapons systems.)
 - (Class VII — Major end items of aviation equipment.)
 - (Class IX — Aircraft repair parts.)
- B — Troop Support Materiel:
 - (Consists of items such as water purification sets, shower, bath, laundry, drycleaning, and bakery equipment; sets, kits, and outfits; tool and equipment sets and shop/equipment sets for performing unit, direct support, general support, and depot-level maintenance operations; sensors and interior intrusion devices; and topographic equipment and related topographic products as outlined in AR 115-11.)
- C — Operational Rations:
 - (Includes an accessory packet of health and comfort items in meal, combat, individual (MCI) issue, or a ration supplement sundries pack issued in conjunction with B rations until PX facilities are established.)
- D — Commercial Vehicles:
 - (Includes wheeled vehicles authorized for use in an administrative or tactical operation.)
- E — General Supply Items:
 - (Includes administrative expendable supplies such as typewriter ribbons, paper, cleaning materials, and other supplies normally referred to as office supplies. Also includes publications distributed through AG channels.)
- F — Clothing and Textiles:
 - (Includes individual and organizational items of clothing and equipment authorized in allowance tables and tentage/tarpaulins authorized in TOE or other media.)

- G — Communications/Electronics (C-E):
(Includes signal items such as radio, telephone, teletype, satellite, avionics, marine communications, and navigational equipment; tactical and nontactical ADP; radar; photographic audio, visual, and television equipment; infrared; Laser/Maser, electronic sensors, etc.)
- H — Test, Measurement, and Diagnostic Equipment (TMDE):
(Includes items of equipment used to determine the operating efficiency of equipment or to diagnose incipient problems in systems, components, assemblies and subassemblies of Army-used materiel.)
- K — Tactical Vehicles:
(Includes trucks, truck tractors, trailers, semitrailer, personnel carriers, etc.)
- L — Missiles:
(Classes II, VII, and IX include guided missile and rocket systems such as NIKE-HERCULES, HAWK, LANCE, TOW, and DRAGON.)
(Class V includes guided missile ammunition items.)
- M — Weapons:
(Includes small arms, artillery, fire control systems, rocket launchers, machine guns, air defense weapons, aircraft weapon subsystems, etc.)
- N — Special Weapons:
(Class V — Includes nuclear and thermonuclear munitions.)
(Class VII — Includes weapons systems which deliver nuclear munitions.)
(Class IX — Includes repair parts for Class VII-N.)
- O — Combat Vehicles:
(Includes main battle tanks, recovery vehicles, self-propelled artillery, armored cars, tracked and halftracked vehicles, etc.)
- P — SIGINT/EW and Intelligence Materiel:
(Includes materiel peculiar to those mission areas assigned to FSC 5811 for which CDR AMC has responsibility. This subclass is identified separately from Subclass G because of specialized supply and maintenance functions performed by a dedicated EW/SIGINT logistical system.)
- Q — Marine Equipment:
(Includes marine items of supply and equipment such as amphibious vehicles, landing craft, barges, tugs, floating cranes, dredges, etc.)
- R — Refrigerated Subsistence:
(Consists of two categories of refrigeration — that which is required to maintain temperatures at 0°F (-17.8C) to keep frozen meals and foods for extended periods, and that which is required to maintain temperatures at approximately 40°F (4.4C) to keep perishables such as fruits, vegetables, and eggs contained in A rations for shorter periods.)
- S — Nonrefrigerated Subsistence:
(Includes items in standard B rations and nonperishable items in A rations.)
- T — Industrial Supplies:
(Includes common supplies and repair parts such as shop stocks, hardware, and fabrication-type items generally having multiple usage/application. Such items are generally managed by DISC.)
- U — COMSEC Materiel:
(Identified separately from Subclass G because of specialized supply and maintenance functions performed through a dedicated COMSEC logistic system.)
- W — Ground:
(Class I — Includes water when it is delivered as a supply item.)
(Class III — Includes petroleum/chemical products and solid fuels used in support of ground and marine equipment.)

Table 2-2. Classes and Subclasses of Supply — (Cont'd)

	(Class V — Includes conventional munitions consisting of chemical, smoke, illuminating, incendiary, riot control, and improved conventional munitions.) (Classes II, VII, and IX — Consist of construction/road building materials and materials for handling equipment.)
X —	In Class: (Indicates no subclass is assigned.)
Y —	Railway Equipment: (Includes rail items of supply and equipment such as locomotives, railcars, rails, rail joining and shifting equipment, etc.)
Z —	Chemical: (Classes II, VII and IX — Include chemical items such as gas masks, decontaminators, and smoke generators.) (Class V — Consists of chemical toxic munitions.)
For Class III, the following subclasses apply:	
1 —	Air, Bulk Fuels (includes jet fuels and aviation gasolines which are normally transported by pipeline, rail tank car, tank, truck, barge, and coastal or ocean-going tankers and which are stored in a tank or container having a fill capacity greater than 500 gallons).
2 —	Air, Packaged Bulk Fuels (includes fuels in Subclass 1 which, because of operational necessity, are generally packaged and supplied in containers of 5- to 55-gallon capacities, except for fuels in military collapsible containers of 500 gallons or less which also will be considered as package fuels).
3 —	Air, Packaged Petroleum Products (includes aircraft-unique petroleum and chemical products generally consisting of lubricating oils, greases, and specialty items normally packaged by the manufacturer and procured, stored, transported, and issued in containers or packages of 55-gallon capacity or less).
4 —	Ground Bulk Fuels (includes MOGAS, diesel, kerosene, and heating oils normally transported by pipeline, rail tank car, tank truck, barge and coastal or ocean-going tankers and stored in a tank or container having a fill capacity greater than 500 gallons).
5 —	Ground, Packaged Bulk Fuels (includes ground bulk fuels which, because of operational necessity, are generally packaged and supplied in containers of 5- to 55-gallon capacities, except for fuels in military collapsible containers of 500 gallons or less which also will be considered as packaged fuels).
6 —	Ground, Packaged Petroleum (includes petroleum and chemical products, generally lubricating oils, greases, and specialty items normally packaged by the manufacturer and procured, stored, transported, and issued in containers of 55-gallon capacity or less).
7 —	Ground, Solid Fuels (includes coal, coke, heating tablets, bars, etc).
For Class VIII, the following subclasses apply:	
1 —	Controlled substances.
2 —	Taxfree alcohol.
3 —	Precious metal.
4 —	Nonexpendable medical items; not restricted.
5 —	Expendable medical items; not restricted.
6 —	All drugs and related items FSC 6505; not otherwise restricted.
7 through 9 —	Commander-designated controlled items.
0 —	USAMMA-controlled sensitive items.

So far as possible, Alpha subclass designations are synonymous with Commodity Manager Codes contained in such publications as SB 700-20 and SB 700-40. Moreover, since the Army Master Data File is the prime item data source for Army-used items of supply and equipment, each item is currently being coded by Supply Categories of Material Code as prescribed in AR 708-1 and broadcast to the field through the Army Master Data File Retrieval Microform System.

Table 2-3. Theater-Level Average Consumption Rates in Temperature Zone
(Pounds per person per day)

Class of Supply	Consumption Rate	Note
I	4.03	1
II	3.67	
III	53.7	
III	0.59	2
Packaged	8.50	3
IV	31.29	4
V	3.20	5
VI	15.00	6
VII	1.22	
VIII	1.22	7
IX	2.50	
X	NA	8

FOOTNOTES:

¹Consumption rate is based on ration mix of two Bs and one meal, ready-to-eat (MRE) per person per day. If the ration supplement sundries pack (RSSP) is used, an additional .41 should be used by the planner. If the female Health and Comfort Sundries pack is used, an additional .03 lb/person/day should be used by the planner. Consumption rate for the Light Infantry Division is 6.62 lb/person/day based on two Ts and one MRE.

²This consumption rate does not include fog oil. To calculate a consumption rate for fog oil, use 200 gallons per smoke generator per day.

³Per Engineer Study Center guidance (1982), consumption rate is comprised of two components: The 4.0 lb/person/day accounts for unit defensive barrier and fortification material. The other component is 4.5 lb/person/day which accounts for construction material requirements for base development in the rear combat zone. The 8.5 lb/person/day represents the complete Class IV planning factor for a theater of operations. It should be noted that for planning purposes the 4.0 figure for barrier material will reduce the 3.2 as the theater matures over time and less barrier material is required. The rate of reduction is dependent upon several variables which include the intensity of the conflict, type of battle, and the commander's initiative in the employment of Class IV (i.e., defense, offense, and highly fluid battlefield would require different quantities of Class IV for employment).

⁴The Class V consumption rate is based upon the TAA 92 P90E Study and is for a moderate level of combat.

⁵Consumption rate is comprised of the following:

Item	Lbs/Person/Day
Tobacco	.139
Food/Drink	2.375
Pers Hygiene	.168
Military Clothing	.097
Jewelry (Watch & Wallers)	.004
Stationery	.081
Civilian Clothing	.096
Gen Supplies (polish, batteries, etc)	.219
Cameras, Radio, Film, etc	.028
	3.207

In all cases, commanders have the prerogative to influence the Army and Air Force Exchange Service (AAFES) operations as they deem appropriate based on the tactical situation.

⁶Consumption rate was derived from Total Army Analysis 90 (TAA 90) and represents mean usage rate for a heavy force.

⁷Consumption rate was derived from Class IX Item Analysis Study (LOGC 1984) and represents a mean usage rate for a heavy force.

⁸Consumption rate of Class X has no meaning when based on military strength. Class X requirements should be developed based on the population, geographic location, and technological capabilities of the country involved.

SECTION II. CLASSES I AND II

2-4. CLASS I.

a. Class I supplies consist primarily of subsistence items. To reduce supply administration and the physical handling of supplies, the Class I system uses as few intermediate echelons as possible. Strength reports, with the addition of any special requirements, act as the triggering device to ship Class I supplies to general support activities. Issues to direct support activities are based on requests for specific types and quantities of rations required to support operations. Table 2-4 gives the characteristics of standard rations to include packaging information, weight per ration, and average calories per ration.

b. Water is a critical combat commodity required for personal consumption, sanitation, cooking, maintenance, equipment operation, decontamination, and other purposes. Except for the specific tasks of detection, well drilling, and construction support performed by engineer units, all water supply functions (purification, storage, distribution, and cooling) are accomplished as part of the combat service support (CSS) structure. Storage and distribution are performed by CSS units configured and equipped similarly to petroleum, oils, and lubricants (POL) supply units. A joint planning factor of 20 gallons per person per day should be used for gross requirements estimating only. Requirements planning must consider individual planning factors and should be applied as appropriate to the level of the organization, tactical situation, and command policies, such as rations to be used,

bath/shower frequency, and laundry service to be provided.

c. Seven water uses may be broken down into requirements per person. The requirements in each type of environment are listed in Table 2-5. Waste, though not considered a use, must also be a factor in planning. A loss factor of about 10 percent must be added to total water requirements to cover evaporation, spills, and waste.

d. There are six water-consuming activities that are not directly related to the number of people in a force structure. The six activities are discussed below.

(1) Water for hospital medical treatment includes water uses unique to medical facilities in echelons above division. Consumption depends on the number of each type of facility and the number of patients in each facility. Potable water should be used. Table 2-6 gives the planning factor for each type of unit. Table 2-7 gives theater per capita planning factors for each environmental region. The factors in Table 2-7 are based on FASTALS/TAA-88 and should be used when the exact number and types of hospitals are unknown.

(2) Water for chemical decontamination includes that used for decontaminating personnel and equipment. The water needed depends on the frequency, intensity, and location of chemical attacks. The factors are 7 gallons per individual decontaminated and 380 gallons per major end item decontaminated.

(3) In vehicle maintenance, water is needed to replace coolant. The best estimate can be made if the

number of vehicles and the radiator capacity of each are known. If only the number of vehicles with radiators is known, planners can use a factor of 0.5 gallon per vehicle per day in temperate climates and 1.0 gallon in hot regions. If the number of vehicles is unknown, planners for the division area may use a factor of .3 gallon per person per day (see TRADOC Pam 525-11).

(4) For graves registration functions, water is used to prepare remains and clean vehicles and graves registration personnel. Amounts needed range from 6 gallons per casualty for temporary burial in the division area to 50 gallons for full mortuary service. The water does not have to be potable. However, it should be free of dirt and, if possible, disinfected.

(5) In engineering operations, water is used in road and airfield construction, quarry and asphalt plant operations, well drilling, pipeline testing, and concrete construction. The planning factor is 1.5 gallons per person per day.

(6) For aircraft, water is used for turbine and aircraft washing and flight operations. To estimate needs, planners must know the total number of aircraft engines and the number with auxiliary power units. The planning factors are 10 gallons per engine and another 5 gallons per auxiliary power unit. If the number of engines or auxiliary power units is unknown, planners for the division area may use a factor of 2 gallon per person per day (see TRADOC Pam 525-11).

Table 2-4. Characteristics of Standard Rations

Packaging Information					
	Contents per package or case	Gross weight per package or case (pounds)	Volume per case (cu ft)	Average wt per meal/unit including packing (lb)	Average calories per meal/unit
Meal, ready-to-eat, individual ¹	12 meals	17.6	0.83 per case	1.47	1,135 per meal
Meal, combat individual ¹	12 meals	26	0.80 per case	2.17	1,135 per meal
Food packet, long-range patrol ²	40 packets	36	1.84 per case	0.90	1,100 per pkt
Food packet, survival, general purpose ³	24 packets	20	0.43 per case	0.83	870 per pkt
Ration Supplement sundries pack (1 pack per 100 persons per day) ⁴	1 packet	41	1.67 per case		
Ration supplement, aid station (makes 100 8-oz drinks) ⁵	1 packet	16	1.01 per case		
Field Ration A ⁶				2.41	
Standard B Ration ⁷				1.278	
T-Ration (Tray Packs) ⁸				2.575	
Female Health & Comfort Sundries Pack (1 pack per 25 females per 30 days) ⁹					

FOOTNOTES:

¹Designed for use as individual meal packets or in multiples of three for a complete ration. This packet is not to be used over extended periods.

²Issued to troops under combat conditions where resupply may be uncertain for as long as 10 days. Because the packet is designed for individual use, it is suitable for tactical feeding, which requires dispersion. The principal menu component is dehydrated and may be eaten as is with drinking water or may be rehydrated rapidly with hot or cold water. Eight different menus are available.

³Contains four food bars, sugar, instant coffee, and soup and gravy base packed in a rectangular can with a key opener taped to it. Minimal recommended issue is one-half packet per person per day in hot climates and one packet per person per day in cold climates.

⁴Composed of items necessary to the health and comfort of troops; e.g., essential toilet articles, tobacco, and confections that usually are obtained at an exchange. This packet is made available in theaters of operation for issue, pending establishment of adequate service facilities.

⁵Designed for use at forward medical aid stations to provide combat casualties with hot, stimulating beverages which alleviate shock and contribute to patient comfort.

⁶The A ration consists of both perishable and nonperishable food. It is intended for use primarily under stable conditions and during static phases of military operations when normal cooking and refrigeration are available.

⁷The B ration is composed of nonperishable food. It is used when there are kitchen facilities but no refrigeration (see SB 10-495).

⁸The T ration is a ready-to-heat and serve tray pack. It is used in the AOE divisions that do not have the inherent capability to supply themselves with A or B rations.

⁹The female health and comfort items are for female hygiene and are obtained ordinarily at an exchange. This packet is made available in theaters of operation for issue, pending establishment of adequate exchange facilities. A package weight is not available, but planners can use an estimated factor of .03 pounds per person per day based on the female health and comfort items listed in AR 700-23.

Table 2-5. Recommended Water Consumption Planning Factors
(Gallons Per Person Per Day)

Uses	Climate		
	Hot	Temperate	Cold
Drinking requirements	3.0 ¹	1.5 ²	2.0
Heat treatment	0.2	0.0	0.0
Personal hygiene ³	1.7	1.7	1.7
Centralized hygiene ⁴	1.0	1.0	1.0
Food preparation ⁵	0.0-4.5	0.0-4.5	0.0-4.5
Laundry ⁶	2.1	2.1	2.1
Divisional medical treatment ⁷	0.4	0.4	0.4
Waste (10 percent)	0.8-1.3	0.7-1.1	0.7-1.2

FOOTNOTES:

¹This figure goes up to 3.5 when personnel assume mission-oriented protection posture (MOPP) 3 to 4 levels continuously.

²This figure goes up to 3.0 when personnel assume MOPP 3 or 4 levels continuously.

³This figure includes water for shaving daily, brushing teeth three times a day, washing hands, and taking sponge baths daily. For periods of less than 7 days, the figure is 0.7 gallon; this water is used for shaving so that masks will fit.

⁴This figure provides water for one shower a week.

⁵The actual factor to use depends on the ration policy in the theater. No water is needed for meals (ready-to-eat) and meals (combat, individual). Bratons require 0.5 gallon per meal per soldier for rehydration and kitchen sanitation. If individual mess equipment is used, 1.0 gallon per soldier is required to sterilize utensils and clean up.

⁶This figure allows for one clothing exchange per week.

⁷This figure is based on Total Army Analysis 88 peak hospital admission rates. All patients not expected to return to duty within 96 hours are evacuated to corps hospitals.

**Table 2.6. Water Planning Factors
for Hospital Units
(Medical Functions Only)**

Type	Number Of Beds	Gallons Per Day
Mobile Army Surgical Hospital	60	8,100
Combat Support Hospital	200	17,700
Evacuation Hospital	400	28,000
Field Hospital ¹	400	31,300

FOOTNOTE:

¹Includes 20,000 gallons per day for laundry of hospital linen.

**Table 2.7. Theater Per Capita
Water Planning Factors For Hospitals¹**

Region	Gallons Per Person Per Day
Temperate	.6
Arctic	.6
Tropic	1.2
Arid	3.5

FOOTNOTE:

¹Number of hospitals and casualty rates based upon FASTALS/TAA-88.

e. Water consumption factors depend on the environment and the level of command. Table 2-8 gives both sustaining and minimum water requirements for individuals of various levels of command. Sustaining levels provide enough water to support continuous operation for extended periods. Minimum

levels provide enough water to support essential operations for less than 7 days.

2.5. CLASS II. Class II supplies are secondary items of equipment authorized in allowance tables and items of supply including expendables and consuma-

bles. Class II items include clothing, individual equipment, tentage, organizational tool sets and tool kits, hand tools, and administrative and housekeeping supplies and equipment. A planning factor of 3.67 pounds per person per day (Table 2-3) can be used for estimating Class II requirements.

**Table 2-8. Water Consumption Factors by Level of Command
(Gallons Per Person Per Day) Extracted from FM 10-52**

Level of Command	Temperate (32° - 80°F)			Arctic (Less Than 32°F)			Hot Tropic (More than 80°F)			Hot-Arid (More than 80°F)		
	Sustaining ¹	Minimum	Sustaining ¹	Minimum	Sustaining ¹	Minimum	Sustaining ¹	Minimum	Sustaining ¹	Minimum	Sustaining ¹	Minimum
Company	3.8-6.8	2.4	4.4-7.4	3.0	5.7-8.7	4.3	6.0-9.0	4.6				
Battalion	3.8-6.8	2.4	4.4-7.4	3.0	5.7-8.7	4.3	6.0-9.0	4.6				
Brigade	4.3-7.3	2.9	4.8-7.8	3.4	6.1-9.1	4.7	9.2-12.2	6.7				
Division	4.3-7.3	2.9	4.8-7.8	3.4	6.1-9.1	4.7	9.4-12.4	6.9				
Above Division	4.9-7.9	3.5	5.5-8.5	4.1	7.5-10.5	6.1	15.6-18.6	10.8				

FOOTNOTE:

¹The ranges in the "Sustaining" columns are the result of differences in ration policy.

SECTION III. CLASSES III AND IV

2-6. CLASS III.

a. Class III supplies consist of fuels and petroleum products. Class III items include petroleum and chemical products used in support of aircraft; petroleum products transported in tankers, cargo barges, etc; packaged bulk fuels; packaged products such as lubricants, greases, and hydraulic fluids; and solid fuels such as coal and coke.

b. Table 2-9 contains weights, volumes, and conversion factors for petroleum products.

c. Table 2-10 provides combat consumption rates for packaged petroleum products. Table 2-11 contains a format for computing bulk fuel requirements with known end item density. Table 2-12 provides combat consumption rates developed for end items which consume either motor gasoline (MOGAS) or diesel fuel (DF) plus aircraft line item numbers (LINs) using jet propulsion fuel, type 4 (JP-4) or aviation gasoline (AVGAS). Table 2-13 provides daily equipment usage rates for other than tracked combat vehicles. Tables 2-11 through 2-13, when specific end items are known, should be used to compute bulk fuel requirements on the basis of equipment density data. Table 2-14 pro-

vides daily equipment usage rates for tracked combat vehicles. Table 2-15 provides Class III bulk planning factors.

2-7. CLASS IV. Class IV supplies consist of construction materials, to include installed equipment and all fortification and barrier materials. Requests for Class IV supplies normally require command approval. FM 5-35 provides weights and cubes for construction and fortification materials. A planning factor of 8.5 pounds per person per day (Table 2-3) can be used for estimating Class IV requirements.

Table 2-9. Weights, Volumes, and Conversion Factors for Petroleum Products

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Product	Packaging	Wt (lb)	Actual	Planning factor	Cu Ft	Conversion factors	Gal per STON	Gal per LTON	Gal per MTON¹	Bbl per LTON¹	Packages per STON	Packages per LTON	Packages per MTON	Cap of veh for carrying filled containers³		
						Gal to lb	Lb to gal							1½-ton tk	2½-ton tk	5-ton tk
2	AVGAS	Bulk														
3	55-gal drums³	373.0	9.03	11	5.90	0.169	339.0	379.7	187.8	9.04	5.36	6.00	3.48	8	14	28
4	55-gal drums⁴	389.0	8.80	11	6.91	0.145	289.4	324.2	187.8		5.14	5.76	3.57	8	13	26
5	55-gal drums⁵	364.0	9.20	11	7.20	0.139	277.8	311.1	192.8		5.49	6.15	3.42	9	14	28
6	5-gal cans⁶	40.5	0.81	1	6.90	0.125	250.0	280.0	200.0		49.40	55.30	40.00	74	124	248
7	Jet fuel (JP-4)	Bulk														
8	55-gal drums³	399.0	9.03	11	6.42	0.156	312.0	349.4	187.8	8.058	5.01	5.61	3.48	8	13	25
9	55-gal drums⁴	415.0	8.80	11	7.39	0.135	270.0	302.4	192.7		4.82	5.40	3.57	8	12	24
10	55-gal drums⁵	392.0	9.20	11	7.68	0.130	260.0	291.2	192.7		5.10	5.71	3.42	8	14	28
11	MOGAS	Bulk														
12	55-gal drums³	384.0	9.03	11	6.11	0.164	327.3	366.6	187.8	8.73	5.21	5.83	3.48	8	13	26
13	55-gal drums⁴	400.0	8.80	11	7.11	0.141	281.2	315.1	192.8		5.00	5.60	3.57	8	13	26
14	55-gal drums⁵	376.0	9.20	11	7.41	0.135	269.9	302.3	192.8		5.32	5.96	3.42	8	14	28
15	5-gal cans⁶	41.6	0.81	1	7.09	0.141	282.1	315.9	181.2		48.10	53.80	40.00	73	121	242
16	Diesel Fuel	Bulk														
17	55-gal drums³	432.0	9.03	11	6.99	0.143	286.1	320.5	187.8	7.63	4.63	5.19	3.48	7	12	24
18	55-gal drums⁴	448.0	8.80	11	8.00	0.125	250.0	280.0	192.7		4.66	5.00	3.57	7	12	24
19	55-gal drums⁵	430.0	9.20	11	8.11	0.123	246.6	276.2	181.2		4.65	5.21	3.42	7	12	24
20	5-gal cans⁶	46.0	0.81	1	9.20	0.109	317.4	243.5	200.0		43.50	48.70	40.00	66	109	218
21	Kerosene	Bulk														
22	55-gal drums³	421.0	9.03	11	6.80	0.147	294.1	329.4	187.8	7.84	4.75	5.32	3.48	8	12	24
23	55-gal drums⁴	437.0	8.80	11	7.80	0.124	247.2	276.9	192.8		4.58	5.13	3.57	7	12	24
24	55-gal drums⁵	351.0	9.20	11	6.62	0.151	302.1	338.3	181.2		5.70	6.38	3.42	9	15	30
25	5-gal cans⁶	45.0	0.81	1	9.00	0.111	222.2	248.9	200.0		44.40	49.80	40.00	67	112	224
26	Lub oils	Bulk														
27	55-gal drums³	472.0	9.03	11	7.60	0.132	263.2	294.7	191.3	7.02	4.24	4.75	3.48	7	11	22
28	55-gal drums⁴	488.0	8.80	11	8.58	0.117	233.1	261.0	196.4		4.10	4.59	3.57	7	11	22
29	55-gal drums⁵	462.0	9.20	11	8.87	0.113	225.5	252.5	196.4		4.33	4.85	3.42	7	11	22
30	5-gal cans⁶	49.0	0.81	1	9.80	0.102	204.1	228.6	181.2		40.80	45.70	40.00	62	103	206
31	1-qt cans (12 per case)	35.0	0.88	1							58.00	64.90	40.00	86	143	286
32	1-qt cans (24 per case)	60.0	1.60	2							33.40	37.30	20.00	50	84	168
33	5-qt cans (6 per case)	77.0	1.90	2							26.00	29.10	20.00	39	65	130
34	Greases	25-lb pails	29.0	0.95	1						69.00	77.20	40.00	104	173	346
35	5-lb cans (6 per case)	44.0	1.10	2							45.40	50.90	20.00	69	114	227
36	Fog oils:	Bulk														
37	55-gal drums³	438.0	9.03	11	7.11	0.140	281.0	314.0	191.3	7.49	4.50	5.02	3.48	7	11	22
38	55-gal drums⁴	588.0	8.80	11	8.11	0.123	246.6	276.2	196.4		4.32	4.84	3.57	7	11	22
39	55-gal drums⁵	421.0	9.20	11	8.10	0.123	246.9	276.5	184.6		4.57	5.12	3.42	7	11	22

Table 2-10. Combat Consumption Rates For Packaged Petroleum Products — (Cont'd)

(Rates Expressed In Unit Of Issue Per 1,000 Persons Per Month)

SHORT-NOMEN/SPEC NSN/UI	INTENSE COMBAT RATE	SUSTAINED COMBAT RATE
CUT FLUID 100% LARD FED-C-O-376		
9150-00-265-9406 1-GAL CN	.0966	.0644
9150-00-231-9054 5-GAL CN	.0116	.0077
9150-00-231-9055 55-GAL DR 18 GA	.0006	.0004
DAMPING FLUID SILICONE WV-D-1078		
9150-00-664-0047 1-LB CN	.0039	.0026
FOG OIL MIL-F-12070		
9150-00-261-7895 55-GL DR 18GA	See Footnote ²	Footnote ²
GREASE, ACFT, MIL-G-81322		
9150-00-181-7724 8-OZ TUBE	1.0240	.6826
9150-00-944-8953 1-LB CN	6.0588	4.0392
9150-00-145-0268 5-LB CN	.9235	.6157
9150-00-5851 35-LB CN	.1893	.1262
GREASE, ACFT, HELI MIL-G-25537		
9150-00-478-0055 14-OZ CA	1.0587	.7058
9150-00-616-9020 1.750-LB CN	.4289	.2859
9150-00-721-8570 6.500-LB CN	.0232	.0155
9150-00-721-8581 35-LB CN	.0155	.0103
GREASE, ACFT & INST MIL-G-23827		
9150-00-985-7244 4 OZ TUBE	.2009	.1340
9150-00-985-7245 8 OZ TUBE	.6376	.4250
9150-00-985-4017 14-OZ CA	.4675	.3117
9150-00-985-7246 1.750-LB CN	4.0456	2.6971
9150-00-985-7247 6.500-LB CN	.3709	.2473
GREASE, ACFT, PNEU SYS MIL-G-4343		
9150-00-269-8255 1.750-LB CN	.2589	.1726
GREASE, AUTO & ARTIL MIL-G-10924		
9150-00-935-1017 14-OZ CA	12.1515	8.1010
9150-00-190-0404 1.750-LB CN	5.6496	3.7664
9150-00-190-0905 6.500-LB CN	11.3589	7.5726
9150-00-190-0907 35-LB CN	8.9583	5.9722
9150-00-530-7369 120-LB DR	.2670	.1760
9150-01-197-7688 2.25-OZ TU	.7866	.5244
9150-01-197-7689 6.5-LB CN	11.3589	7.5726
9150-01-197-7690 1.75-LB CN	5.6496	3.7664
9150-01-197-7691 120-LB DR	.2670	.1760
9150-01-197-7692 35-LB CN	8.9583	5.9722
9150-01-197-7693 14-OZ CA	12.1515	8.1010

GREASE BALL & ROLLER BEARING MIL-G-25013			
9150-00-141-6770 1.75-LB CN	.0889	.0592	
GREASE GP MIL-G-23549			
9150-00-985-7316 1.75-LB CN	.0927	.0618	
GREASE GRAPH ACFT FED-W-G-671			
9150-00-257-5370 GR-1 1.750-LB CN	1.9745	1.3163	
9150-00-235-5568 GR-1 7.500-LB CN	.0811	.0541	
9150-00-272-7652 GR-1 35-LB CN	.0077	.0052	
9150-00-190-0918 GR-2 1.750-LB CN	.5691	.3794	
9150-00-190-0919 GR-2 7.500-LB CN	.1662	.1108	
GREASE, MOLY, DISUL MIL-G-21164			
9150-00-935-4018 14-OZ CA	1.6963	1.1309	
9150-00-754-2595 1.750-LB CN	1.7311	1.1540	
9150-00-223-4004 6.500-LB CN	.2937	.1958	
9150-00-965-2003 35-LB CN	.0541	.0361	
GREASE, PLUG VALVE MIL-G-6032			
9150-00-257-5360 TYPE 1 1.750-LB CN	.2009	.1340	
GREASE, RIFLE MIL-G-46003			
9150-00-754-0063 1-LB CN	.2241	.1494	
HYD, FLD, AUTO			
9150-00-698-2382 1-QT CN	91.5691	61.0460	
9150-00-657-4959 5-GL CN	2.9328	1.9552	
HYD, FLD, AUTO ESW-M2C33-F			
9150-00-843-1636 1-GL CN	3.3192	2.2128	
HYD, FLD, NON PET BASE, ACFT MIL-H-83282			
9150-00-149-7431 1-QT CN	38.4468	25.6312	
9150-00-149-7432 1-GL CN	3.8988	2.5992	
9150-00-180-6290 55-GL DR 18 GA	.0155	.0103	
HYD, FLD, PET BASE MIL-H-5606			
9150-00-252-6383 1-QT CN	26.8664	17.9109	
9150-00-223-4134 1-GL CN	7.3068	4.8712	
9150-00-265-9408 55-GL DR 18 GA	.0889	.0592	
9150-00-159-4472 16-OZ CN	.2241	.1494	
9150-00-935-9807 1-QT CN	13.9336	9.2891	
9150-00-935-9808 1-GL CN	17.1330	11.4220	
9150-00-935-9809 5-GL CN	3.4969	2.3313	
9150-00-935-9810 55-GL DR 18 GA	.1777	.1185	
HYD, FLD, SYNTH MIL-H-46170			
9150-00-111-6256 1-QT CN	7.1870	4.7914	
9150-00-111-6254 1-GL CN	25.7845	17.1896	
LUBE CLEAN PRES MIL-L-63460			
9150-01-102-1473 .5-OZ BT	76.8434	51.2289	
9150-01-054-6453 1-PT BT	29.7721	19.8481	
9150-01-0553-6688 1-GL BT	19.2543	12.8362	

Table 2-10. Combat Consumption Rates For Packaged Petroleum Products — (Cont'd)
 (Rates Expressed in Unit Of Issue Per 1,000 Persons Per Month)

SHORT-HOME/SPEC NSM/II	INTENSE COMBAT RATE	SUSTAINED COMBAT RATE
LUBE OIL, ACFT, PISTON ENG MIL-L-22851		
9150-00-168-6889 1-QT CN TYPE II	3.2728	2.1819
9150-00-065-0115 1-GL CN TYPE II	.1121	.0747
9150-00-753-5060 5-GL CN TYPE II	.3362	.2241
9150-00-753-4937 55-GL DR TYPE II 18 GA	.1430	.0953
9150-00-019-5701 1-QT CN TYPE III	1.2210	.8140
9150-00-965-2303 5-GL CN TYPE III	.0077	.0052
9150-00-965-2305 55-GL DR TYPE III 18 GA	.0166	.0077
LUBE OIL, ACFT TURB ENG MIL-7808		
9150-00-108-5359 8-OZ CN	.7419	.4946
9150-00-782-2627 1-QT CN	32.5040	21.6693
9150-00-782-2679 55-GL DR 18 GA	.0039	.0026
LUBE OIL, ACFT TURB SH ENG, MIL-L-23699		
9150-00-180-6266 8-OZ CN	37.5504	25.0366
9150-00-985-7099 1-QT CN	140.4873	93.6582
9150-00-681-5999 55-GL DR 18 GA	.1005	.0670
LUBE OIL, AIR COMP BMS-3-7A-81205		
9150-00-753-4667 1-QT CN	.5255	.3503
LUBE OIL, AUTO WEAPONS MIL-L-46000		
9150-00-935-6597 2-OZ BT	10.8462	7.2308
9150-00-889-3522 4-OZ BT	11.1167	7.4112
9150-00-687-4241 1-QT CN	1.3679	.9119
9150-00-753-4686 1-GL CN	.7728	.5152
LUBE OIL, COL GRAPH		
9150-00-598-7122 3.6 OZ CN	.7689	.5162
LUBE OIL, G P FED-W-L-820		
9150-00-252-6173 4-OZ CN	3.9451	2.6301
9150-00-252-6174 1-QT CN	.2628	.1752
LUBE OIL, G P MIL-L-7870		
9150-00-542-1430 4-OZ CN	.6337	.4225
9150-00-263-3490 1-QT CN	.4096	.2731
9150-00-273-2397 1-GL CN	.1468	.0979
LUBE OIL, G P MIL-L-3150		
9150-00-231-2361 1-QT CN	2.0518	1.3679
9150-00-231-2356 5-GL CN	.0657	.0438
LUBE OIL, G P, PRE LOW TE FED W-L-800		
9150-00-273-2389 4-OZ CN	10.5642	7.0428
9150-00-458-0075 16-OZ CN	1.2017	.8011
9150-00-231-6689 1-QT CN	2.9173	1.9449

9150-00-231-9062 5-GL CN	.1391	.0927
9150-00-281-2060 55-GL DR 18 GA	.1777	.1185
LUBE OIL, ENG MIL-L-46152		
9150-00-186-6689 1-QT CN GR-30	.1662	.1108
9150-00-186-6696 55-GL DR GR-30 18 GA	.0193	.0129
9150-00-186-6699 1-QT CN GR-10W 30	39.2283	26.1522
9150-00-256-6411 5-GL CN GR-10W 30	4.2744	2.8496
9150-00-186-6703 55-GL DR GR-10W 30 18 GA	1.2915	.8610
9150-00-186-6705 1-QT CN GR 15W - 40	8.4411	5.6274
9150-00-186-6706 5-GL CN GR 15W - 40	.7805	.5204
9150-00-186-6709 55-GL DR GR 15W-40 18 GA R	.2202	.1468
9150-01-177-2762 24-QT BX GR-10W 30 HDPE	1.6344	1.0896
9150-01-177-2763 24-QT BX GR-15W 40 HDPE	.3519	.2346
LUBE OIL, ENG, JOHN DEERE, MIL-L-2104		
9150-00-090-5754 55-GL DR	.0889	.0592
LUBE OIL, EXP GEAR FED-V-L-751		
9150-00-234-5199 5-LB CN	.1159	.0773
9150-00-234-5199 5-LB CN	.0348	.0232
LUBE OIL, GEAR MIL-L-6086		
9150-00-240-2235 1-PT CN GR-M	.0232	.0155
9150-00-223-4130 1-GL CN GR-M	.0696	.0464
9150-00-265-9417 1-GL CN GR-L	.0077	.0052
9150-00-223-4116 5-GL CN GR-L	.0039	.0026
LUBE OIL, GEAR MIL-L-2105		
9150-01-035-5390 1-QT CN GR-75W	.1546	.0438
9150-01-035-5391 5-GL CN GR-75W	.5719	.3812
9150-01-035-5392 1-QT CN GR 80W 90	3.1414	2.0943
9150-01-035-5393 5 GL CN GR-80W 90	27.2475	18.1650
9150-01-035-5394 55-GL DR GR-80W 90 18 GA	1.2522	.8348
9150-01-035-5395 5-GL CN GR-85W 140	1.2365	.8248
9150-01-035-5396 55-GL DR GR-85W 140 18 GA	.0657	.0438
LUBE OIL, GEAR P/N F-61		
9150-00-823-8068 1-PT CN	.0193	.0129
LUBE OIL, HYD & TURB MIL-L-17672		
9150-00-985-7232 5-GL CN	.1159	.0773
9150-00-985-7233 55-GL DR 18 GA	.1043	.0696
9150-00-753-4799 1-GL CN	.0270	.0180
9150-00-985-7234 5-GL CN	.2318	.1546
9150-00-582-5480 55-GL DR 18 GA	.0783	.0522
9150-00-985-7237 5-GL CN	.0386	.0258
9150-00-584-2560 55-GL DR 18 GA	.0232	.0155
LUBE OIL, INSTR MIL-L-6085		
9150-00-664-6518 1½-OZ BT	.0464	.0309
9150-00-257-5449 4-OZ CN	.2202	.1468
9150-00-223-4129 1-QT CN	.5216	.3478

Table 2-10. Combat Consumption Rates For Packaged Petroleum Products — (Cont'd)

(Rates Expressed In Unit Of Issue Per 1,000 Persons Per Month)

SHORT-NOMEN/SPEC NSN/UI	INTENSE COMBAT RATE	SUSTAINED COMBAT RATE
LUBE OIL, INTER, CMB, ENG MIL-L-2104		
9150-00-189-6727 1-QT CN GR-10	43.6578	29.1052
9150-00-186-6668 5-GL CN GR-10	48.3519	32.2346
9150-00-191-2772 55-GL DR GR-10 18 GA	5.5599	3.7066
9150-00-186-6681 1-QT CN GR-30	139.4820	92.9880
9150-00-188-9858 5-GL CN GR-30	71.2269	47.4846
9150-00-189-6729 55-GL DR GR-30 18 GA	6.7770	4.5180
9150-00-189-6730 1-QT CN GR-40	.0734	.0489
9150-00-188-9862 55-GL DR GR-40 18 GA	.2643	.1762
9150-01-152-4117 1-QT CN GR 15W-40	11.2317	7.4878
9150-01-152-4118 5-GL CN GR 15W-40	7.5507	5.0338
9150-01-152-4119 55-GL DR GR 15W-40	.9351	.6234
9150-01-177-3988 24-QT BX GR-10 HPDE	1.8192	1.2128
9150-01-178-4725 24-QT BX GR 15W-40 HDPE	.4680	.3120
9150-01-178-4726 24-QT BX GR-30 HDPE	5.8119	3.8746
LUBE OIL, INTER, CMB, ENG PRE MIL-L-21260		
9150-00-111-3199 5-GL CN TYPE I GR-10	.3168	.2112
9150-00-111-0208 55-GL DR GR-10 18 GA	.9039	.6026
9150-00-111-0209 5-GL CN GR-30	1.0046	.6698
9150-00-111-0210 55-GL DR TYPE II GR-30	1.7334	1.1556
9150-00-111-0211 5-GL CN GR-50	.0193	.0129
9150-00-111-0214 55-GL DR TYPE II GR-50 18 GA	.2793	.1862
LUBE OIL, JET ENG MIL-L-6081		
9150-00-273 2388 1-QT CN	3.3385	2.2257
9150-00-273-8807 1-GL CN	.0193	.0129
9150-00-231-6676 55-GL DR	.0425	.0283
LUBE OIL, PUNCH SOROBAN 90		
9150-00-426-1937 1-PT	.0580	.0386
LUBE OIL, REF FED-W-L-825		
9150-00-598-2911 1-QT CN TYPE II	.8153	.5435
9150-00-292-9657 1-GL CN TYPE II	.1198	.0799
9150-00-265-7301 1-QT CN TYPE III	.0811	.0541
9150-00-664-4448 1-GL CN TYPE III	.0039	.0026
LUBE OIL, SEMI FL MIL-L-46150		
9150-00-949-0323 8-OZ TUBE	1.2288	.8192
LUBE OIL, STEAM TURB CO MIL-L-17331		
9150-00-235-9061 5-GL CN MIL SYM 2190 TEP	.0502	.0335
9150-00-235-9062 55-GL DR MIL SYM 2190 TEP 18 GA	.0155	.0103

LUBE OIL, SUB ZERO MIL-L-46167		
9150-00-402-2372 5-Gl CN	.4637	.3091
9150-00-491-7197 55-Gl DR	.1314	.0876
LUBE OIL, VAC MIL-L-83767		
9150-00-273-8663 1-Qt BT TYPE II	.3632	.2421
LUBE OIL, WEAPONS MIL-L-14107		
9150-00-292-9689 1-Qt CN	.8153	.5435
9150-00-292-9687 5-Gl CN	.0077	.0052
LUBRICANT SOLID FILM MIL-L-46147		
9150-00-168-2000 16-Oz CN	14.9769	9.9846
PENETRATING OIL FED-W-P-216		
9150-00-261-7899 1-Pt CN	21.1593	14.1062
9150-00-223-4119 1-Gl CN	.4637	.3091
PETROLATUM TECH FED-W-P-236		
9150-00-250-0926 1.75-LB CN	.5410	.3606
9150-00-250-0933 7.5-LB CN	.0077	.0052
INSULATING OIL ELEC 81346-D 3487		
9160-00-685-0913 TYPE I 5-Gl CN	.0541	.0361
INSULATING OIL ELEC MIL-C-47220		
9160-00-237-4777 TYPE II 1-Gl CN	.4173	.2782
WAX, SKI FSCM-C4016		
9160-00-903-3999 1.5-Oz CN	1.0240	.6826
WAX SKI CROSS COUNTRY		
916-00-903-5115 1.5-Oz CN	.7264	.4843

FOOTNOTES:

¹The consumption rate for Trioxane is based on the number of meals, ready to eat (MRES), NSN 8970-00-149-1094, being consumed:

Arctic Zone - 4 bars per meal
 Temperate Zone - 1 bar per meal
 Tropic Zone - 1 bar per 3 meals

²To calculate a consumption rate for fog oil, use 200 gallons per smoke generator per day.

Table 2-1. Format for Computing Bulk Fuel Requirements with Known End Item Density

1. The formula for computing the bulk fuel requirements for types of equipment other than tracked vehicles (TV) is as follows:
End item density x consumption rate (gal/hr) (Table 2-10) x area usage rate (hr/day) (Table 2-11) = Bulk fuel requirements for 1 day.

EXAMPLE:

- a. Airplane, Observation OV-1B. A sample computation for the JP-4 consuming observation airplane OV-1B, LIN A30221, EI NSN 1510-00715-9379 in CONUS with a theoretical density of 6 would look as follows:

Consumption rate for LIN A30221, EI NSN 1510-00-715-9379 = 225.00 gal/hr.

Daily usage rate for CONUS aircraft (AV) = 4 hr/day.

Computation: 6 airplanes x 225.00 gal/hr x 4.0 hr/day = 5,400 gals of JP-4 for 1 day.

EXAMPLE:

- b. Generator Set, MEP-0164. A sample computation for the MORGAS consuming generator set, MEP-0164, LIN J45699, EI NSN 6115-00-017-8237 in Europe with theoretical density of 32 would look as follows:

Consumption rate for LIN J45699, EI NSN 6115-00-017-8237 = .84 gal/hr

Daily usage rate for European generators (GN) = 12 hr/day.

Computation: 32 generators x .84 gal/hr x 12 hr/day = 322.56 gals of MORGAS for 1 day.

EXAMPLE:

- Truck, Cargo 2-1/2 M36A2. A sample computation for the multifuel-consuming, 2-1/2 ton cargo truck M36A2, LIN X40283, EINSN 2320-00-077-1618 in CONUS with a theoretical density of 16 would look as follows:

Consumption rate for LIN X 40283, EI NSN 2320-00-077-1618 = .15 gal/mile.

Daily usage rate for CONUS wheeled vehicles (WV) = 50 miles/day.

Computation: 16 trucks x .15 gal/mile x 50 miles/day = 120.00 gal for 1 day.

2. The formula for computing bulk fuel requirements for tracked combat vehicles (TV) is as follows:

End item density x [(idle consumption rate (gal/hr) x area idle usage rate (hr/day)) + (cross country consumption rate (gal/hr) x area cross country usage rate (hrs/day) + (secondary road consumption rate (gal/hr) x area secondary road usage (hrs/day))] (Table 2-12) = Bulk fuel requirements for 1 day.

EXAMPLE:

- a. Tank, Combat 105MM, M60A3. A sample computation for a diesel fuel-consuming, 105-MM combat tank M60A3, LIN V13101, EI NSN 2350-00-148-6548 in CONUS with a theoretical density of 54, would look as follows:

Consumption rates for LIN V13101, EI NSN 2350-00-148-6548 = idle = 2.00 gal/hr; cross country = 28.10 gal/hr; secondary roads = 35.70 gal/hr.

Daily usage rates for CONUS tracked vehicles (TV), LIN V13101 = idle = 4.2 hr/day; cross country = 8.5 hr/day; secondary roads = 2.9 hr/day.

Computation: 54 tanks x [(2.00 gal/hr x 4.2 hr/day) + (28.10 gal/hr x 8.5 hr/day) + (35.70 gal/hr x 2.9 hr/day)] = 18,942.12 gallons of diesel fuel for 1 day.

Table 2-12. Combat Consumption Rates for Bulk Fuels

Definition of Terms — The following information is provided as an explanation of all column headings used in this table.

1. LI — Line item number.

2. EI NSN — End item national stock number assigned to the item.

3. SNSN — For internal use at GMPA.

4. CMD—Command code identifying item managers. Applicable codes are:

B, H - TSARCOM	L - MICOM
K - TACOM	MK - ARRCOM

E, J - GMPA

5. FUEL NSN — Identifies the type of fuel consumed by the end item.

Applicable fuels are:

Motor gasoline - 9130-00-160-1818	JP-4—9130-00-256-8613
Diesel Fuel Marine - 9140-00—273—2377	Aviation gasoline - 9130-00-179-1125

As an aid in computing, diesel fuel consuming end items are shown in this publication as consuming DFM. The DFM rates are not intended to indicate the type of diesel fuel to be used in the end item.

6. EQUIP TYPE—Equipment Type. Applicable codes are:

AB - Amphibious	OV - Other Vehicles
AV - Aviation	SG - Stationary Equipment - MISC
CE - Construction	SV - Stationary Equipment - Vehicle mounted.
GN - Generators	TO - Tracked Vehicles - other
HG - Heating	TV - Tracked Vehicles - combat
MH - Material Handling	WV - Wheeled Vehicles

7. CONSUMP CD - Consumption Rate Code. Applicable codes are:

H - Gallons per hour
M - Gallons per mile

8. CONSUMPTION RATES — ID/AV, XCNTRY; 2NDRDS—Consumption Rates, Idle/Average; Cross-Country; Secondary Roads. Tracked vehicle fuel consumption rates are expressed by mode of operation during periods of idle time, travel cross-country, and travel on secondary roads. Rates for all other types of equipment have been expressed by an AV - average rate.

9. NOMENCLATURE — Short description of the end item.

10. MULTIFUEL—EIs with an "M" in this column are capable of burning either diesel fuel or MOGAS. In these cases, the most representative consumption rate has been provided.

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTRY	2NDPDS		
A29676	1510 01 005 5461	H	9130 00 256 8613	AV	H	130.00			APLNGOTRANSC12A	
A29744	1510 01 070 3661	H	9130 00 256 8613	AV	H	105.00			C12C AIRPLANE CARG	
A29812	1510 01 087 9129	H	9130 00 256 8613	AV	H	105.00			C12D AIRPLANE CARG	
A30053	1510 00 929 1012	H	9130 00 179 1125	AV	H	15.50			APL FLT TRNG T-41B	
A30221	1510 00 715 9379	H	9130 00 256 8613	AV	H	225.00			APLN OBSN STOL OV-	
A30271	1510 00 715 9380	H	9130 00 256 8613	AV	H	219.60			APLN OBSN STOL OV-	
A30296	1510 00 869 3654	H	9130 00 256 8613	AV	H	252.00			APLN OBSN STOL OV-	
A30444	1510 00 368 8440	H	9130 00 256 8613	AV	H	252.00			APLN RECON PV-ID	
A30465	1510 00 945 9998	H	9130 00 179 1125	AV	H	57.00			APLN RECON UTIL RU	
A30585	1510 00 804 3641	H	9130 00 256 8613	AV	H	115.40			APLN RECON UTIL RU2	
A30586	1510 00 453 9451	H	9130 00 256 8613	AV	H	89.20			AIRPLANE RU-21E	
A30591	1510 00 394 3320	H	9130 00 256 8613	AV	H	117.10			APLN RECON UTIL RU2	
A30596	1510 00 872 7908	H	9130 00 179 1125	AV	H	39.20			APL TRNR INST T-42	
A30636	1510 00 033 6312	H	9130 00 179 1125	AV	H	20.00			APLN UTILITY U-3A	
A30637	1510 00 024 5063	H	9130 00 179 1125	AV	H	20.00			APLN UTILITY U-3B	
A30671	1510 00 508 0604	H	9130 00 256 8613	AV	H	23.80			APLN UTILITY U-6A	
A30694	1510 00 587 3375	H	9130 00 256 8613	AV	H	80.20			APLN RECONUT RU21A	
A30721	1510 00 574 7938	H	9130 00 179 1125	AV	H	57.00			APLN UTILITY U-8D	
A30762	1510 00 878 4338	H	9130 00 256 8613	AV	H	97.50			APLN RECONUT RU21B	
A30821	1510 00 701 2233	H	9130 00 179 1125	AV	H	60.50			APLN UTILITY U-8F	
A30831	1510 00 912 4084	H	9130 00 179 1125	AV	H	57.00			APLN UTILITY U-8G	
A30843	1510 00 878 4336	H	9130 00 256 8613	AV	H	97.50			APLN RECONUT RU21C	
A30946	1510 00 933 8223	H	9130 00 256 8613	AV	H	115.40			APLN UTILITY U-21A	
A30951	1510 00 169 0295	H	9130 00 256 8613	AV	H	128.10			APLN UTILITY U-21F	
A30953	1510 00 140 1627	H	9130 00 256 8613	AV	H	115.40			APLN UTILITY U-21G	
A30971	1510 00 964 9780	H	9130 00 179 1125	AV	H	30.20			APLN UTILITY U-10A	
A30989	1510 01 011 1462	H	9130 00 256 8613	AV	H	97.50			APLN UTIL STOL UV-18A	
A93125	2350 00 140 5151	S K	9140 00 273 2377	TO	K	0.4661			M551 ARAV 152MM	
A93125	2350 00 873 5408	S K	9140 00 273 2377	TO	K	0.4661			M551A1 ARAV 152MM	
B01756	3820 00 201 8293	K	9130 00 160 1818	CE	H	6.00			AUGER EARTH	
B01756	3820 00 391 0514	K	9130 00 160 1818	CE	H	3.20			AUGER HDM-S	
B01756	3820 00 391 4136	K	9130 00 160 0101	CE	H	3.20			AUGER K-254	
B01756	3820 00 542 3235	K	9130 00 160 1818	CE	H	6.00			AUGER EARTH	
B01756	3820 00 931 4509	K	9130 00 160 1818	CE	H	6.00			AUGER EARTH	
B01756	3820 01 068 4078	K	9130 00 160 1818	CE	H	4.50			AUGER EARTH	
B01756	3820 01 146 7204	K	9130 00 160 1818	CE	H	4.50			AUGER EARTH 270-9	
B04441	2310 01 090 7739	K	9130 00 160 1818	WV	K	0.0373			AUTO SEDAN COMPACT	
B04715	2310 01 090 7740	K	9130 00 160 1818	WV	K	0.0435			AUTO SEDAN INTERM	
B04832	2310 01 091 1060	K	9130 00 160 1818	WV	K	0.0311			AUTO S/W COMPACT	
B12482	3815 00 017 9482	K	9140 00 273 2377	CE	H	5.00			BACKHOE CS3/4CU YD	
B12585	3815 00 618 8099	K	9140 00 273 2377	CE	H	7.00			BACKHOE 85585862/3	
B25476	1940 01 105 5728	B	9140 00 273 2377	AB	H	7.20			BOAT BRIDGE ERECT	

B31745	1935 00 375 2990	B	9140 00 273 2377	AB	H	10.00		BARGE REFR 7010
B31745	1935 00 375 2991	B	9140 00 273 2377	AB	H	18.00		BARGE REFRIG
B83582	1940 00 417 0526	B	9140 00 273 2377	AB	H	12.50		BOAT BR EREC DSL
B83582	1940 00 355 4469	B	9130 00 160 1818	AB	H	15.00		BOAT T-15
B83582	1940 00 417 0526	B	9130 00 160 1818	AB	H	12.50		BOAT BR EREC DSL E
B83993	1940 00 268 9952	B	9140 00 273 2377	AB	H	18.00		BOAT 2001
B84130	1940 00 267 1099	B	9140 00 273 2377	AB	H	10.00		BOAT 4003
B84267	1940 00 268 9955	B	9140 00 273 2377	AB	H	24.20		BOAT PICKET 4002
B84541	1940 00 554 6699	B	9140 00 273 2377	AB	H	4.00		BOAT UT 26FT WOOD
C10908	2350 01 110 4660	K	9140 00 273 2377	TO	K	0.2796		CARR AMMO TT M992
C12155	2350 01 085 3702	K	9140 00 273 2377	TO	K	0.2858		SUPPORT VEH XM 981
C18481	3820 00 902 3107	K	9130 00 160 1818	WV	K	0.3107		BREAKER PAV BOM47L
C18481	3820 01 048 8120	K	9130 00 160 1818	WV	K	0.3107		BREAKER PAV BP-50
C36100	2590 00 649 5937	K	9130 00 160 1818	CE	H	6.50		BULLDOZER EARTH M8A1
C36100	2590 00 801 6588	K	9130 00 160 1818	CE	H	6.50		BULLDOZER EARTH M8A2
C36100	2590 00 838 1800	K	9130 00 160 1818	CE	H	6.50		BULLDOZER EARTH M8E1
C36100	2590 00 944 4903	K	9130 00 160 1818	CE	H	6.50		BULLDOZER EARTH M8A3
C36120	2590 00 708 3563	K	9140 00 273 2377	SG	H	25.00		M9 BULLDOZER MVG
C36151	3810 01 165 0646	K	9140 00 273 2377	CE	H	7.00		CRANE 7 1/2 TON
C36219	3810 01 165 0647	K	9140 00 273 2377	CE	H	7.00		CRANE A/A 7 1/2 TON
C38874	3950 01 110 9224	K	9140 00 273 2377	CE	H	7.50		CRANE TRK MT 140T
C38874	3950 01 027 9254	K	9140 00 273 2377	CE	H	7.50		CRANE MOBL 140 TON
C38942	3950 01 027 9253	K	9140 00 273 2377	CE	H	13.20		CRANE MOBL 300 TON
C72872	4310 01 053 3891	K	9130 00 160 1818	SG	H	10.50		COMPR AIR 750 CFM
C39836	2310 01 090 7710	K	9140 00 273 2377	WV	K	0.4163		BUS 66 PAX
C39836	2310 01 095 7447	K	9140 00 273 2377	WV	K	0.4163		BUS AMB CUNY
C39977	2310 01 090 7707	K	9140 00 273 2377	WV	K	0.4163		BUS TRANSIT 28 PAX
C39977	2310 01 090 7708	K	9140 00 273 2377	WV	K	0.4163		BUS TRANSIT 36 PAX
C39977	2310 01 090 7709	K	9140 00 273 2377	WV	K	0.4163		BUS TRANSIT 44 PAX
C40045	2310 01 090 7711	K	9140 00 273 2377	WV	K	0.4163		BUS AMB CONV82 PAX
C40106	2310 01 091 0997	K	9140 00 273 2377	WV	K	0.4163		BUS MOTOR 84-90 PAX
C43497	3810 01 144 3023	K	9140 00 273 2377	CE	H	6.00		CRANE TRK SGT YORK
C72872	4310 01 053 3891	K	9130 00 160 1818	SG	H	10.50		COMPR AIR 750 CFM
C74517	4310 01 015 3147	B	9140 00 273 2377	SG	H	1.00		COMPR RCP KA51GF
C74517	4310 01 107 8006	B	9140 00 273 2377	SG	H	1.00		COMPR AIR 5 CFM
C76335	2350 01 049 2695	S K	9140 00 273 2377	TV	H	6.40	18.00	CAV FGT VEH XM3
C84541	8115 01 015 7039	B	9140 00 273 2377	SG	H	1.09		CONT REFRIG SC-209
D10726	2350 00 071 0732	K	9140 00 273 2377	TV	H	1.00	8.60	M125A1 CARR 81MM
D10726	2350 01 068 4087	K	9140 00 273 2377	TV	H	1.00	8.60	M125A2 CARR 81MM
D10741	2350 01 069 6931	K	9140 00 273 2377	TV	H	1.00	6.20	M106A1 CARR MORTAR
C82583	3610 00 598 5811	B	9130 00 160 1818	SV	H	1.00		M106A2 CARR MORTAR
D10990	2350 00 411 2057	K	9140 00 273 2377	TO	K	0.2796		CAMERA SECT TOPOS
D11049	2350 00 078 4545	K	9140 00 273 2377	TV	H	1.00	5.90	CARR CGO AMPH M116
D11049	2350 01 096 9356	K	9140 00 273 2377	TV	H	1.00	11.80	M548 CARR CGO 6TON
D11538	2350 00 056 6808	K	9140 00 273 2377	TV	H	1.00	8.60	M548A1CARR CGO 6TON
D11538	2350 01 068 4089	K	9140 00 273 2377	TV	H	1.00	8.60	CARRCMD PST M577A1
							8.90	CARRCMD PST M577A2

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTY	2NDROS		
D11621	2350 00 056 6809	K	9140 00 273 2377	TO	K	0.1491			CARR FLMTWWM132A1	
D11621	2350 00 987 8900	K	9140 00 273 2377	TO	K	0.1491			CARR FLMTWWM132	
D11681	1450 00 176 2697	K	9140 00 273 2377	TO	K	2.8274			CARR MISS SYS TOW	
D12087	2350 00 968 6321	K	9140 00 273 2377	TV	H	1.00	8.60	8.90	M113A1 CARRIER PER	
D12087	2350 01 068 4077	K	9140 00 273 2377	TV	H	1.00	8.60	8.90	M113A2 CARR PERS	
D14593	6675 00 526 4719	B	9140 00 273 2377	WV	K	0.1056			CARTO SECT TOPO	
D32859	4220 01 023 0246	B	9140 00 273 2377	SG	H	1.00			DIV EQ ST SPITYPEA	
E02807	2330 00 331 2307	K	9140 00 273 2377	GN	H	4.20			M200A1 CHAS TR GEN	
E32353	4940 01 017 7835	M	9140 00 273 2377	SG	H	13.00			CLEANER STEAM PRS	
E32466	4940 00 186 0027	M	9140 00 273 2377	SG	H	4.00			CLEANER STM PRESS	
E32535	4940 00 473 6218	M	9140 00 273 2377	SG	H	15.00			CLEANER STEAM	
E56578	2350 00 795 1797	K	9140 00 273 2377	TV	H	2.00	26.53	18.79	COMBT VEH ENG M728	
E56896	2350 01 045 1123	K	9140 00 273 2377	TV	H	1.00	8.60	8.90	M901 CMBT VEH ITH	
E56896	2350 01 045 1123	K	9140 00 273 2377	TV	H	1.00	8.60	8.90	VEH ANTITANK M901A1	
E61618	3895 01 103 5641	K	9130 00 160 1818	SG	H	4.00			COMPACTOR HS K300	
E69105	4310 00 049 5199	B	9130 00 160 1818	SG	H	1.00			COMPR RCP GE 321	
E69105	4310 00 208 2601	B	9130 00 160 1818	SG	H	1.00			COMPR RCP GE 3218	
E69105	4310 00 508 3361	B	9130 00 160 1818	SG	H	1.00			COMPR RCP 376 HG	
E69105	4310 00 608 1146	B	9130 00 160 1818	SG	H	1.00			COMPR RCP GE 321	
E69105	4310 00 612 1186	B	9130 00 160 1818	SG	H	1.00			COMPR PRCP IBYCH33	
E69105	4310 00 625 7622	B	9130 00 160 1818	SG	H	1.00			COMPR RCP 907AENG1	
E69105	4310 00 630 7969	B	9130 00 160 1818	SG	H	.22			COMPR RCP DEC3460E	
E69242	4310 00 075 5251	B	9130 00 160 1818	SG	H	1.00			COMPR RCP 458 ENG2	
E69242	4310 00 376 8762	B	9130 00 160 1818	SG	H	.95			COMPR RCP GE 331XA	
E69242	4310 00 620 5430	B	9130 00 160 1818	SG	H	1.00			COMPR RCP CV8969AE	
E69242	4310 00 624 3889	B	9130 00 160 1818	SG	H	1.00			COMPR RCP 458 ENG	
E69242	4310 00 678 9645	B	9130 00 160 1818	SG	H	1.00			COMPR RCP CUG 969	
E69242	4310 00 861 9818	B	9130 00 160 1818	SG	H	1.00			COMPR RCP 458 ENG1	
E69242	4310 00 880 0186	B	9130 00 160 1818	SG	H	.95			COMPR RCP HGR-8M1	
E69242	4310 00 965 1197	B	9130 00 160 1818	SG	H	.95			COMPR RCP 458 ENG3	
E69242	4310 01 128 1826	B	9130 00 160 1818	SG	H	1.00			COMPR RCP C-20X-80	
E69242	4310 01 164 5544	B	9130 00 160 1818	SG	H	1.00			COMPR RCP 50-6840	
E69379	4310 00 060 6798	B	9130 00 160 1818	SG	H	1.75			COMPR RCP 44241	
E69790	4310 00 605 2190	B	9130 00 160 1818	SG	H	1.39			COMPR RCP 60-WBO	
E69790	4310 00 810 4077	B	9130 00 160 1818	SG	H	1.54			COMPR RCP NWE60	
E70064	4310 00 079 6290	B	9130 00 160 1818	SG	H	1.00			COMPR RCP LP512EN1	
E70064	4310 00 733 2210	B	9130 00 160 1818	SG	H	.22			COMPR RCP LP512EN2	
E70064	4310 00 843 8885	B	9130 00 160 1818	SG	H	.22			COMPR RCP G3-11PC	
E70064	4310 00 861 9820	B	9130 00 160 1818	SG	H	.22			COMPR RCP LP512EN	
E70064	4310 01 055 0594	B	9130 00 160 1818	SG	H	.22			COMP RCP 20-902	
E70064	4310 01 080 5754	B	9130 00 160 1818	SG	H	.22			COMP RCP 1S-7-95-5	
E70064	4310 01 105 5794	B	9130 00 160 1818	SG	H	.22			COMP UNIT REC20-910	
E70201	4310 00 075 3311	B	9130 00 160 1818	SG	H	.45			COMPR LP823 ENG1	

E70201	4310 00 788 8969	B	9130 00 160 1818	SG	H	.45	COMPR LP823 ENG2
E70201	4310 00 861 9822	B	9130 00 160 1818	SG	H	.45	COMPR LP823 ENG
E70201	4310 01 079 8878	B	9130 00 160 1818	SG	H	.45	COMP RCP 20-905
E70338	4310 00 733 2217	B	9130 00 160 1818	SV	H	.95	COMPR RCP BM452EN
E70338	4310 00 852 1745	B	9130 00 160 1818	SG	H	.95	COMPR RCP BGR-5M-1
E70338	4310 01 069 6935	B	9130 00 160 1818	SV	H	.95	COMP RCP KA5-54515
E70817	4310 00 728 2030	B	9130 00 160 1818	SG	H	.35	COMPR RCP 892960
E70817	4310 00 728 2031	B	9130 00 160 1818	SG	H	.35	COMPR RCP 3800219
E70817	4310 00 878 7969	B	9130 00 160 1818	SG	H	.45	COMPR RCP 43040-30
E70817	4310 00 930 0060	B	9130 00 160 1818	SG	H	1.00	COMPR RCP 3800219
E70817	4310 00 997 6004	B	9130 00 160 1818	SG	H	.45	COMPR RCP 893811
E70886	4310 00 231 5513	B	9130 00 160 1818	SG	H	3.35	COMPR RCP 12021A
E70886	4310 00 402 5107	B	9130 00 160 1818	SG	H	3.35	COMPR RCP P4R15GJ
E70886	4310 00 509 9790	B	9130 00 160 1818	SG	H	1.25	COMPR RCP SS600
E70886	4310 00 624 3212	B	9130 00 160 1818	SG	H	3.35	COMPR RCP 15HGPM5S
E70886	4310 00 624 3213	B	9130 00 160 1818	SG	H	3.35	COMPR RCP 15HGPM5S
E70886	4310 01 070 5615	B	9130 00 160 1818	SV	H	3.35	COMP RCP 1-MCAA
E70886	4310 01 087 4314	B	9130 00 160 1818	SG	H	2.54	COMPUNITRECIPROCAT
E71023	4310 00 082 6036	B	9130 00 160 1818	SG	H	3.35	COMPR RCP 415HGPM51
E71023	4310 00 566 8899	B	9130 00 160 1818	SG	H	3.35	COMPR RCP P4R15GJ
E71023	4310 00 679 6917	B	9130 00 160 1818	SG	H	3.35	COMPR RCP P-4
E72393	4310 00 691 0877	B	9130 00 160 1818	SV	H	7.50	COMPR RCP P-4
E72393	4310 00 818 9824	B	9130 00 160 1818	SV	H	3.22	COMPR RCP P-4
E72393	4310 01 043 7604	B	9140 00 273 2377	SG	H	2.37	COMPR RCP P-4
E72598	4310 00 503 0483	K	9130 00 160 1818	SG	H	5.00	COMPR RCP 250 CRM
E72667	4310 00 797 3417	K	9130 00 160 1818	SG	H	6.00	COMPR RCP 250 CRM
E72804	4310 00 075 7064	K	9140 00 273 2377	SG	H	6.00	COMPR RCP 250 CRM
E72804	4310 00 078 2462	K	9140 00 273 2377	SG	H	5.75	COMPR RCP 250 CRM
E72804	4310 00 079 4805	K	9140 00 273 2377	SG	H	5.75	COMPR RCP 250 CRM
E72804	4310 00 248 3496	K	9140 00 273 2377	SG	H	5.75	COMPR RCP 250 CRM
E72804	4310 00 256 9319	K	9140 00 273 2377	SG	H	5.75	COMPR RCP 250 CRM
E72804	4310 00 471 3075	K	9140 00 273 2377	SG	H	6.00	COMPR RCP 250 CRM
E72804	4310 00 952 7142	K	9140 00 273 2377	SG	H	5.62	COMPR RCP 250 CRM
E72804	4310 01 079 4805	K	9140 00 273 2377	SG	H	5.75	COMPR RCP 250 CRM
E73352	4310 00 136 4369	K	9140 00 273 2377	SG	H	15.00	COMPR RCP 250 CRM
E73352	4310 00 542 2525	K	9140 00 273 2377	SG	H	6.00	COMPR RCP 250 CRM
E73352	4310 00 542 2526	K	9140 00 273 2377	SG	H	6.00	COMPR RCP 250 CRM
E73352	4310 00 620 4056	K	9140 00 273 2377	SG	H	6.00	COMPR RCP 250 CRM
E73352	4310 00 878 1905	K	9140 00 273 2377	SG	H	6.00	COMPR RCP 250 CRM
E73489	4310 00 542 5928	K	9130 00 160 1818	SG	H	6.00	COMPR RCP 250 CRM
E73489	4310 00 679 8696	K	9130 00 160 1818	SG	H	7.00	COMPR RCP 250 CRM
E73489	4310 00 679 8697	K	9130 00 160 1818	SG	H	7.00	COMPR RCP 250 CRM
E73626	4310 00 808 9392	B	9130 00 160 1818	SG	H	.45	COMPR RCP 250 CRM
E73626	4310 00 906 8994	B	9130 00 160 1818	SG	H	.45	COMPR RCP 250 CRM
E73626	4310 00 914 2551	B	9130 00 160 1818	SG	H	.45	COMPR RCP 250 CRM
E73626	4310 00 935 5345	B	9130 00 160 1818	SG	H	.45	COMPR RCP 250 CRM
E74037	4310 00 073 5431	M	9130 00 160 1818	SG	H	.25	COMPRESSOR AN-MAC

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SHSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTY	2NDRDS		
E74037	4310 00 073 5054	M	9130 00 160 1818	SG	H	.25			COMPR AN-M4D	
E74037	4310 00 592 8560	M	9130 00 160 1818	SG	H	.25			COMPR AN M4	
E74037	4310 00 848 6075	M	9130 00 160 1818	SG	H	.25			COMPR AN M4B	
F00355	3655 00 062 7911	B	9130 00 160 1818	SG	H	.45			CARDODY DIV MDL E46	
F00355	3655 00 605 7703	B	9130 00 160 1818	SG	H	2.25			CARDODX MOL FE 3436	
F06698	3910 00 298 7088	K	9130 00 160 1818	CE	H	1.12			CONVEYOR BELT N	
F06698	3910 00 817 9170	K	9130 00 160 1818	CE	H	1.12			CONVEYOR BELT PH70	
F06835	3910 00 271 1889	K	9130 00 160 1818	CE	H	1.12			CONVEYOR BELT PBL	
F07109	3910 00 298 7176	K	9130 00 160 1818	MH	H	2.00			CONVEYOR BELT PBL	
F13075	6675 00 526 4824	B	9140 00 273 2377	SG	H	6.00			COPYSUP SECTOP MS	
F35953	1935 00 264 6220	B	9140 00 273 2377	AB	H	46.50			CRANE 413D	
F36090	1935 00 178 8205	B	9140 00 273 2377	AB	H	45.00			CRANE 264	
F36090	1935 00 217 2302	B	9140 00 273 2377	AB	H	45.00			CRANE 250	
F36090	1935 00 264 6219	B	9140 00 273 2377	AB	H	45.00			CRANE 264B	
F36364	3810 00 701 7324	K	9140 00 273 2377	CE	H	3.40			CRANE CRLR 1125	
F36364	3810 00 728 9945	K	9140 00 273 2377	CE	H	3.40			CRANE CRLR 1125WZD	
F37460	2230 00 554 2728	B	9140 00 273 2377	OV	H	10.50			CRANE LOCO 40TFS	
F37460	2230 00 939 6649	B	9140 00 273 2377	OV	H	10.50			CRANE LOCO 840DE	
F37735	2230 00 529 9910	B	9140 00 273 2377	OV	H	7.50			CRANE LOCO DSL	
F39104	3950 00 197 4935	K	9130 00 160 1818	MH	H	1.00			CRANE TRK 10FM	
F39104	3950 00 271 1837	K	9130 00 160 1818	MH	H	1.00			CRANE TRK NC-10 QM	
F39104	3950 00 723 3294	K	9130 00 160 1818	MH	H	1.00			CRANE TRK 29690	
F39104	3950 00 723 3295	K	9130 00 160 1818	MH	H	1.00			CRANE TRK 46717	
F39172	3810 00 902 3082	K	9140 00 273 2377	CE	H	6.00			CRANE WHL M63	
F39172	3810 00 921 5055	K	9140 00 273 2377	CE	H	6.00			CRANE WHL M-65	
F39241	3810 00 948 0407	K	9140 00 273 2377	CE	H	6.00			CRANE WHL H-446	
F39378	3810 00 043 5354	K	9140 00 273 2377	CE	H	6.00			CRANE WHL 2385	
F39378	3810 00 275 1167	K	9130 00 160 1818	CE	H	2.90			CRANE WHL MTD 20T M320	
F39378	3810 00 763 7728	K	9140 00 273 2377	CE	H	6.00			CRANE WHL 2380	
F40474	3810 00 542 3048	K	9140 00 273 2377	CE	H	9.00			CRAN SHVL M855BG24	
F40474	3810 00 542 3049	K	9140 00 273 2377	CE	H	9.00			CRAN SHVL M855BG24	
F40474	3810 00 606 8569	K	9140 00 273 2377	CE	H	9.00			CRANE SHVL M855BG4	
F40474	3810 00 786 5200	K	9140 00 273 2377	CE	H	9.00			CRAN SHVL M855BG34	
F40474	3810 00 933 0588	K	9140 00 273 2377	CE	H	9.00			CRANE SHVL 855BG2	
F40474	3810 00 933 0589	K	9140 00 273 2377	CE	H	9.00			CRANE SHVL 855BG	
F40474	3810 00 933 0590	K	9140 00 273 2377	CE	H	9.00			CRANE SHVL 855BG3	
F43003	3810 00 433 7174	K	9140 00 273 2377	CE	H	8.00			CRANE SP AIR MAINT	
F43003	3810 00 144 4885	K	9140 00 273 2377	CE	H	2.00			SCAMP VEHICLE	
F43067	3810 00 859 2404	K	9140 00 273 2377	CE	H	7.00			CRANE WHL H446A	
F43077	3810 00 815 2308	K	9130 00 160 1818	CE	H	3.60			CRANE WHL GW7	
F43077	3810 00 818 3381	K	9130 00 160 1818	CE	H	3.60			CRANE WHL 155-1A	
F43364	3810 00 869 3092	K	9140 00 273 2377	CE	H	6.10			CRANE SHVL 22BM	

F43364	3810 00 937 3939	K	9140 00 273 2377	CE	H	4.50	CRANE SHVL 36M
F43414	3810 00 087 5020	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M-22
F43414	3810 00 151 4431	K	9130 00 160 1818	CE	H	7.00	CRANE SHOVEL M320T2
F43414	3810 00 189 9694	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M-20-A
F43414	3810 00 240 7502	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL 34T CA
F43414	3810 00 240 7505	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL 304
F43414	3810 00 527 8612	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M-20-B
F43414	3810 00 527 8613	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M-20-AC
F43414	3810 00 542 4980	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M200W
F43414	3810 00 542 4982	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M200
F43414	3810 00 634 8999	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M20B
F43414	3810 00 820 0698	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M202
F43414	3810 00 861 8088	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL M320T
F43414	3810 00 989 0505	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL 2360
F43414	3810 00 989 0506	K	9130 00 160 1818	CE	H	7.00	CRANE SHVL 2360W
F43429	3810 00 018 2021	K	9140 00 273 2377	CE	H	7.00	CRANE TM25T M1250
F43429	3810 01 054 9779	K	9140 00 273 2377	CE	H	7.10	CRANE 25T TMS 300-5
F49399	3820 00 725 6462	K	9140 00 273 2377	CE	H	10.80	CRUS SCR PLT 75 TP
F49536	3820 00 878 4285	K	9130 00 160 1818	CE	H	7.00	CRUS SCR PLT MOL2A
F49673	3820 00 527 8577	K	9140 00 273 2377	SV	H	42.00	CRUS SCR WDE 225TPH
F50221	3820 00 360 2475	K	9140 00 273 2377	CE	H	38.00	CRUS SCR WSH 33RTR
F50221	3820 00 641 4971	K	9140 00 273 2377	CE	H	38.00	CRUSH SCR WSH DI50
F50858	3820 00 530 1184	K	9140 00 273 2377	SV	H	21.00	CRUSHER JAW 153 PAD
F50858	3820 00 832 5168	K	9140 00 273 2377	SV	H	21.00	CRUSHER JAW 153 PRD 66
F50995	3820 00 880 0795	K	9130 00 160 1818	CE	H	4.60	CRUS JAW 1524PAC
F81880	4230 00 926 9488	M	9130 00 160 1818	SG	H	3.30	DECON APPR M1ZAI
F89168	4230 00 078 5455	B	9130 00 160 1818	SG	H	.35	DELOUSER 7000
F89168	4230 00 889 2315	B	9130 00 160 1818	SG	H	.33	DELOUSER 252QM
F89168	4230 00 935 9361	B	9130 00 160 1818	SG	H	.33	DELOUSER CDR7000B
G27664	3895 00 438 6857	K	9130 00 160 1818	SV	H	1.50	DISTRBTR ENTNR D52
G27664	3895 00 459 2484	K	9130 00 160 1818	SV	H	3.00	DISTR BIT SEA 800M
G27664	3895 00 641 5913	K	9130 00 160 1818	SV	H	3.00	DISTR BIT S-T SDC
G27664	3895 00 641 6025	K	9130 00 160 1818	SV	H	3.00	DISTR BIT RE
G27664	3895 00 690 8289	K	9130 00 160 1818	SV	H	3.00	DISTR BIT D-30
G27664	3895 00 832 9337	K	9130 00 167 1818	SV	H	3.00	DSTR BIT D37
G27664	3895 00 833 8820	K	9130 00 160 1818	SV	H	3.00	DISTR BIT 424-56CE
G27664	3895 00 855 6248	K	9130 00 160 1818	SV	H	3.00	DISTR BIT 42456CE6
G27664	3895 00 989 1147	K	9130 00 160 1818	SV	H	3.00	DISTR BIT MIL-D 32
G27844	3895 00 090 0434	K	9130 00 160 1818	CE	H	7.00	DISTR BIT D60
G27844	3895 01 028 4390	K	9140 00 273 2377	CE	H	1.20	DISTR BIT M918
G27854	3820 01 026 1237	K	9130 00 160 1818	SV	H	3.00	DISTRIB TRK MTD
G27859	3895 00 102 6262	K	9140 00 273 2377	CE	H	6.50	DISTR TRCTR DST CNT
G27938	3895 00 527 8620	K	9130 00 160 1818	CE	H	7.00	DISTR BIT US3CTOD
G27938	3895 00 641 6026	K	9130 00 160 1818	CE	H	7.00	DISTR BIT US-3C
G27938	3895 00 767 0247	K	9130 00 160 1818	CE	H	7.00	DISTR BIT MTD
G28212	3825 00 077 0550	K	9130 00 160 1818	SV	H	1.30	DIST WTR TNKW15A4
G28212	3825 00 382 9001	K	9130 00 160 1818	SV	H	1.30	DISTR WTR TNK6743
G28212	3825 00 383 7133	K	9130 00 160 1818	SV	H	4.00	DISTR WTR TNKNOE

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTY	2NDORS		
G28212	3825 00 403 9334	K	9130 00 160 1818	SV	H	4.50			DISTR WTR TNKGENT	
G28212	3825 00 407 0406	K	9130 00 160 1818	SV	H	4.50			DIST WTR TNK 1602	
G28212	3825 00 474 3742	K	9130 00 160 1818	SV	H	4.50			DIST WTR TNK W15B	
G28212	3825 00 527 9213	K	9130 00 160 1818	SV	H	4.50			DIST WTR TNK WD10Z	
G28212	3825 00 543 6053	K	9130 00 160 1818	SV	H	1.00			DISTR WTR TNKM73A	
G28212	3825 00 554 0079	K	9130 00 160 1818	SV	H	1.00			DISTR WTR TNKMME	
G28212	3825 00 629 5901	K	9130 00 160 1818	SV	H	1.00			DISTR WTR TNKW-1M5	
G28212	3825 00 641 5815	K	9130 00 160 1818	SV	H	1.00			DISTR WTR TNKWD100	
G28212	3825 00 774 9090	K	9130 00 160 1818	SV	H	4.50			DISTR WTR TNKW15A6	
G28212	3825 00 879 2122	K	9130 00 160 1818	SV	H	1.00			DISTR WTR TNKMSE	
G28212	3825 00 954 9033	K	9130 00 160 1818	SV	H	4.50			DISTR WTR TNKW15A	
G28250	3825 00 611 6259	K	9130 00 160 1818	SV	H	3.00			DIST WATER TRK MTD	
G28280	3825 00 431 8310	K	9130 00 160 1818	SV	H	2.50			DISTRIB WAT TK	
G29729	3825 00 438 1485	K	9130 00 160 1818	SV	H	2.50			DISTRIB WAT TK	
G29739	3825 00 616 8869	K	9130 00 160 1818	CE	H	3.00			DIST WATER TK 4200	
G29911	3805 00 457 6121	K	9130 00 160 1818	CE	H	7.00			DITCH MACH CRLR/WH	
G29945	3805 00 050 4638	K	9140 00 273 2377	CE	H	7.60			DITCH MACH 624VL	
G29945	3805 00 542 3054	K	9140 00 273 2377	CE	H	4.20			DITCH MACH 750	
G29945	3805 00 727 6719	K	9140 00 273 2377	CE	H	4.20			DITCH MACH 4262	
G36074	6115 00 260 3082	B	9140 00 273 2377	GN	H	1.50			GN ST, PU732/M	
G37273	6115 00 033 1373	B	9140 00 273 2377	GN	H	.57			GEN ST PU751/M	
G53871	6115 00 394 9581	B	9140 00 273 2377	GN	H	3.00			GEN ST 30KW PU-760	
G55186	3895 00 755 4761	K	9130 00 160 1818	CE	H	2.50			DRIER PM 415MIL	
G55186	3895 00 832 6230	K	9130 00 160 1818	CE	H	1.50			DRIER LITTLEFORD70	
G55186	3895 00 989 3243	K	9130 00 160 1818	CE	H	1.50			DRIER LITTLEFORD70	
G55186	3895 01 103 7833	K	9130 00 160 1818	CE	H	1.50			DRIER AEDGO 80M	
G55196	3895 00 591 0105	K	9130 00 160 1818	CE	H	3.00			DRIER MIXER BIT	
G58426	3820 00 554 9694	K	9130 00 160 1818	CE	H	8.56			DRILL MCH 43-SA	
G58426	3820 00 937 0489	K	9130 00 160 1818	CE	H	8.56			DRILL MCH 43SA2	
G58613	3820 00 245 7668	K	9140 00 273 2377	CE	H	16.50			DRILLMCH WELLROT T	
G58613	3820 01 075 4974	K	9140 00 273 2377	CE	H	17.90			DRILL MACH WELL RO	
G74978	3805 01 063 2012	K	9140 00 273 2377	CE	H	8.70			GRADER RD 32,000 LBS	
G96572	2350 01 089 1261	M	9140 00 273 2377	TV	H	12.20	49.50	37.70	GUN AIR DEF XM247	0
H26136	2230 00 712 7519	B	9130 00 160 1818	OV	H	1.00			EXTRACTOR SPIKE	
H26343	4520 00 287 3353	B	9130 00 160 1818	HG	H	.63			HEATER M1950 YUKON	M
H28647	1520 01 106 9519	H	9130 00 256 8613	AV	H	160.00			CPTR ATTCK AH-64A	
H30517	1520 01 088 3669	H	9130 00 256 8613	AV	H	372.80			HCPTR CH-47D	
H30616	1520 01 082 0686	H	9130 00 256 8613	AV	H	142.00			HCPTR ETRONICE H60A	
H30829	1520 01 042 9396	H	9130 00 256 8613	AV	H	86.00			HCPTR EH-1X	
H31110	1520 01 020 4216	H	9130 00 256 8613	AV	H	39.90			HCPTR OBSRV OH58C	
H31872	1520 01 043 4949	H	9130 00 256 8613	AV	H	101.67			UH1V HELICOPTER	
H56206	3895 00 410 4441	K	9130 00 160 1818	CE	H	7.50			FINISHING MACHINE	
H56391	4210 00 202 8076	B	9130 00 160 1818	SV	H	8.00			FI FHT EQ A/VAC CL5	
H56391	4210 01 193 3621	B	9140 00 273 2377	SV	H	7.00			FI FHT EQ ST MULTI	
H56528	4210 00 393 0349	B	9130 00 160 1818	SV	H	8.00			FI FHT EQ ST BR CL	

H56802	4210 00 393 0353	B	9130 00 160 1818	SV	H	8.00	FI FHT EQ ST T CL5
H79426	6230 00 179 1482	H	9130 00 160 1818	GN	H	.95	FLD LITMGENOG42T
H79426	6230 00 181 2498	H	9130 00 160 1818	GN	H	.95	FLD LITMGENOG42TMA
J30093	6115 00 559 1449	B	9140 00 273 2377	GN	H	75.00	GEN UNIT 750KWS-66
J30093	6115 00 596 3405	B	9140 00 273 2377	GN	H	70.00	700KW DIESEL GEN
J30492	1040 00 587 3618	M	9140 00 273 2377	GN	H	3.00	GEN SMK A1C M3A3
J35424	6115 00 722 3760	K	9140 00 273 2377	GN	H	1.50	GEN ST PU-402/M
J35492	6115 00 394 9577	B	9140 00 273 2377	GN	H	1.50	GEN ST, PU-405A/M
J35492	6115 00 949 8409	B	9140 00 273 2377	GN	H	1.50	GEN ST TM PU-405/M
J35561	6115 00 702 3347	B	9140 00 273 2377	GN	H	3.00	GEN ST TM PU-407
J35595	6115 00 132 0488	B	9140 00 273 2377	GN	H	6.00	GEN ST TM PU-699/M
J35595	6115 00 258 1655	B	9140 00 273 2377	GN	H	6.00	GEN ST PU 699AM
J35629	6115 00 220 3878	B	9140 00 273 2377	GN	H	6.00	GEN ST TM PU-650AG
J35629	6115 00 258 1622	B	9140 00 273 2377	GN	H	6.00	GEN ST TM PU-650BG
J35663	6115 00 125 7876	B	9140 00 273 2377	GN	H	6.00	GEN ST TRK MTD PU7
J35663	6115 00 283 9051	B	9140 00 273 2377	GN	H	6.00	GEN ST PU 700AM
J35680	6115 00 394 9573	B	9140 00 273 2377	GN	H	6.00	GEN ST, PU707AM
J35680	6115 00 464 4195	B	9140 00 273 2377	GN	H	6.00	GEN ST TM PU 707/M
J35698	6115 00 709 0469	B	9140 00 273 2377	GN	H	3.00	GEN ST TM PO-408M
J35801	6115 00 394 9575	B	9140 00 273 2377	GN	H	10.00	GEN ST, PU-495A/G
J35801	6115 00 823 2218	B	9140 00 273 2377	GN	H	10.00	GEN ST TM PU-495/G
J35813	6115 00 465 1044	B	9140 00 273 2377	GN	H	.57	GEN ST DSL MEP 002
J35825	6115 00 465 1030	B	9140 00 273 2377	GN	H	1.09	GEN ST DSL MEP 003
J35825	6115 00 937 3523	B	9140 00 273 2377	GN	H	1.09	GEN ST LIBBY 14800
J35835	6115 00 118 1241	B	9140 00 273 2377	GN	H	1.50	GEN ST MEP 004A
J35869	6115 00 118 1245	B	9140 00 273 2377	GN	H	1.50	GEN ST MEP 103A
J35869	6115 00 922 8690	B	9140 00 273 2377	GN	H	1.50	GEN ST BOGUE MOL 6
J36006	6115 00 118 1244	B	9140 00 273 2377	GN	H	1.50	GEN ST MEP 113A
J36040	6115 00 089 5099	B	9140 00 273 2377	GN	H	1.50	GE ST HOLGAR SPHF
J36109	6115 00 118 1240	B	9140 00 273 2377	GN	H	3.00	GEN ST DSL
J36304	6115 00 077 8600	B	9130 00 160 1818	GN	H	3.00	GENST HOLG CE301AC
J36304	6115 00 118 1247	B	9130 00 160 1818	GN	H	3.00	GENST MEP-104A
J36304	6115 00 935 5111	B	9130 00 160 1818	GN	H	3.00	GENST WESTHSESF30C
J36383	6115 00 394 9576	B	9140 00 273 2377	GN	H	3.00	GEN ST, PU-406B/M
J36383	6115 00 738 6342	B	9140 00 273 2377	GN	H	3.00	GEN ST TM PU-406 A
J36725	6115 00 118 1248	B	9140 00 273 2377	GN	H	3.00	GEN ST MEP 114A
J37205	6115 00 889 1307	K	9140 00 273 2377	GN	H	5.00	GEN ST PU-551/M
J38301	6115 00 118 1243	B	9140 00 273 2377	GN	H	6.00	GEN ST MEP 006A
J38301	6115 00 118 4240	B	9140 00 273 2377	GN	H	6.00	GENSTIAC 3500-447237
J38369	6115 00 118 1252	B	9140 00 273 2377	GN	H	6.00	GEN ST MEP-105A
J38369	6115 00 937 4388	B	9140 00 273 2377	GN	H	6.00	GEN ST 60DGFH22X60
J38506	6115 00 118 1253	B	9140 00 273 2377	GN	H	6.00	GEN ST MEP-115A
J38506	6115 00 937 4389	B	9140 00 273 2377	GN	H	6.00	GEN ST 60DGF1402X6
J38547	6115 00 081 2030	B	9140 00 273 2377	GN	H	10.00	GEN ST MIL26727
J38547	6115 00 156 4342	B	9140 00 273 2377	GN	H	10.00	GEN ST JTA DB001M
J38712	6115 00 133 9101	B	9140 00 273 2377	GN	H	10.00	GEN ST MEP 007A
J38712	6115 00 301 5761	B	9140 00 273 2377	GN	H	10.00	GEN ST CONS-EL4180
J38712	6115 00 624 2767	B	9140 00 273 2377	GN	H	10.00	GEN ST JTAMD 100

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						IDL/AV	XCNTRY	2NDRDS		
J38712	6115 00 792 2541	B	9140 00 273 2377	GN	H	10.00			GEN ST CONSD-E4115	
J38712	6115 00 933 3498	B	9140 00 273 2377	GN	H	10.00			GEN ST HOLTEROSHB3	
J38712	6115 01 036 6374	B	9140 00 273 2377	GN	H	10.00			GEN ST MEP007B	
J38986	6115 00 133 9102	B	9140 00 273 2377	GN	H	10.00			GEN ST MEP 106A	
J38986	6115 00 798 3444	B	9140 00 273 2377	GN	H	10.00			GEN ST GMC 6910A	
J40150	6115 00 935 8729	B	9140 00 273 2377	GN	H	20.00			GEN ST MEP 108A	
J40150	6115 00 999 7901	B	9140 00 273 2377	GN	H	20.00			GEN ST ALIS CH4444	
J40158	6115 00 133 9104	B	9140 00 273 2377	GN	H	20.00			GEN ST MEO 009A	
J40158	6115 00 436 4228	B	9140 00 273 2377	GN	H	20.00			GENSTWAKESHA EB12	
J40356	6115 00 476 5878	B	9140 00 273 2377	GN	H	32.00			GEN ST MEP 011A	
J40356	6115 00 782 7099	B	9140 00 273 2377	GN	H	32.00			GENSTSTEWSTEV 5800	
J40698	6115 00 843 8501	H	9130 00 160 1818	GN	H	1.05			GN ST GAS ENG 28V	
J41041	6115 00 697 2402	B	9130 00 160 1818	GN	H	2.40			GEN ST PU253/U	
J41452	6115 00 056 8421	B	9130 00 160 1818	GN	H	2.40			GEN ST PU304C/MPQ4	
J41452	6115 00 643 4674	B	9130 00 160 1818	GH	H	2.40			GEN ST GAS EN PU30	
J41819	6115 00 753 2231	B	9130 00 160 1818	GN	H	2.40			GEN ST TM PU375A/G	
J41819	6115 00 931 6789	B	9130 00 160 1818	GN	H	2.40			GEN ST TM PU375B/G	
J41897	6115 00 702 3348	B	9130 00 160 1818	GN	H	1.40			GENSKW 60CV PU409M	
J42100	6115 00 738 6339	B	9130 00 160 1818	GN	H	2.40			GEN SE 10KW PU619/	
J42115	6115 00 127 8544	H	9140 00 273 2377	GN	H	4.20			GEN ST GAS TC-26C	
J42115	6115 01 083 7005	H	9130 00 160 1818	GN	H	3.30			GEN OVI AIRCRAFT	
J42137	6115 00 930 9498	B	9130 00 160 1818	GN	H	.50			GEN ST HMLTE XLA	
J42137	6115 00 964 5431	B	9130 00 160 1818	GN	H	.50			GEN ST MIL-G-52368	
J42685	6115 00 436 4230	B	9130 00 160 1818	GN	H	2.40			GEN ST PU532PPS4	
J42685	6115 00 889 1212	B	9130 00 160 1818	GN	H	2.40			GEN ST PU532/PPS4	
J42856	6115 00 940 7867	B	9130 00 160 1818	GN	H	.25			GEN SET GAS ENG	
J42976	6115 00 923 4469	B	9130 00 160 1818	GN	H	.25			GEN ST MEP 014A	
J43027	6115 00 940 7862	B	9130 00 160 1818	GN	H	.25			GEN ST MEP 019A	
J43918	6115 00 591 6867	B	9130 00 160 1818	GN	H	.54			GEN ST KK15M25	
J43918	6115 00 774 9342	B	9130 00 160 1818	GN	H	.54			GEN ST WIPM153682A	
J43918	6115 00 887 8644	B	9130 00 160 1818	GN	H	.54			GEN ST HOLGAR	
J43918	6115 00 889 1446	B	9130 00 160 1818	GN	H	.54			GEN ST MEP 015A	
J44055	6115 00 017 8236	B	9130 00 160 1818	GN	H	.54			GEN ST MEP 025A	
J44055	6115 00 646 6122	B	9130 00 160 1818	GN	H	.54			GEN ST PNRCENTRCE	
J44055	6115 00 849 2323	B	9130 00 160 1818	GN	H	.54			GENSTWPG1528T2A01	
J45699	6115 00 017 8237	B	9130 00 160 1818	GN	H	.84			GEN ST MEP 016A	
J45836	6115 00 017 8238	B	9130 00 160 1818	GN	H	.84			GEN ST MEP 021A	
J46110	6115 00 017 8239	B	9130 00 160 1818	GN	H	.84			GEN ST MEP 026A	
J46252	6115 00 873 3915	B	9130 00 160 1818	GN	H	.84			GEN ST UM PR625/G	
J46255	6115 00 087 0972	B	9130 00 160 1818	GN	H	.84			GEN ST TM PU 626/G	
J46258	6115 00 087 0873	B	9130 00 160 1818	GN	H	.84			GEN ST TM PU 628/G	
J46265	6115 00 485 9207	B	9130 00 160 1818	GN	H	.84			GEN ST TM PU 666/G	
J46384	6115 00 738 6335	B	9130 00 160 1818	GN	H	.84			GEN ST TM PU-617M	

J46392	6115 00 937 5555	B	9130 00 160 1818	GN	H	1.40	GEN ST TM PU 629/G
J46396	6115 00 059 5172	B	9130 00 160 1818	GN	H	1.40	GEN ST TM PU 631/G
J46589	6115 00 857 1397	B	9130 00 160 1818	GN	H	1.05	GENERATOR SET
J46692	6115 00 456 9792	B	9130 00 160 1818	GN	H	1.40	GEN ST MEP 027A
J47068	6115 00 017 8240	B	9130 00 160 1818	GN	H	1.40	GEN ST MEP 017A
J47343	6115 00 738 6338	B	9130 00 160 1818	GN	H	1.40	GEN ST TM PU 409AM
J47480	6115 00 738 6337	B	9130 00 160 1818	GN	H	1.40	GEN SET 5KW PU-618
J47617	6115 00 738 6340	B	9130 00 160 1818	GN	H	1.40	GEN SET TM PU-620/
J48713	6115 00 017 8241	B	9130 00 160 1818	GN	H	1.40	GEN SET MEP-022A
J49055	6116 00 074 6396	B	9130 00 160 1818	GN	H	2.00	GENERATOR SET
J49055	6115 00 903 4948	B	9130 00 160 1818	GN	H	2.00	GENERATOR SET
J49055	6115 00 926 8335	B	9130 00 160 1818	GN	H	2.00	GENERATOR SET
J49055	6115 00 999 5935	B	9130 00 160 1818	GN	H	2.00	GENERATOR SET
J49398	6115 00 690 8290	B	9130 00 160 1818	GN	H	1.50	GEN PAC MER PM5901
J49398	6115 00 889 1447	B	9130 00 160 1818	GN	H	2.40	GEN ST MEP 018A
J49466	6115 00 926 0843	B	9130 00 160 1818	GN	H	2.40	GEN ST MEP-023A
J49809	6115 00 738 6336	B	9130 00 160 1818	GN	H	2.40	GEN ST TM PU 332AG
J50151	6115 00 989 3296	B	9130 00 160 1818	GN	H	2.40	GEN ST TM PU 656/G
J50185	6115 00 937 8468	B	9130 00 160 1818	GN	H	2.40	GEN ST TM PU 678/M
J50195	6115 00 789 3656	B	9130 00 160 1818	GN	H	2.40	GEN SET PU681/TLQ
J50220	6115 00 226 1568	B	9130 00 160 1818	GN	H	2.40	GEN SETBOGUE5380B
J50220	6115 00 840 6577	B	9130 00 160 1818	GN	H	2.40	GEN SET GAS ENGPDI
J50220	6115 00 972 2326	B	9130 00 160 1818	GN	H	2.40	GEN SETBOGUE5380A
J51418	6115 00 016 2356	B	9140 00 273 2377	GN	H	4.50	GEN ST TMPU-614/M
J51453	6115 00 778 8788	B	9130 00 256 8613	GN	H	16.60	GEN GAS TURB ENG
J51453	6115 00 849 6030	B	9130 00 256 8613	GN	H	14.12	30 KW GAS TURB GEN
J51480	6115 00 967 7005	B	9130 00 160 1818	GN	H	3.50	GENERATOR SET
J51505	6115 00 758 5492	B	9130 00 160 1818	GN	H	16.60	GEN GFD 60KW 400CY
J51547	6115 00 074 6442	B	9130 00 160 1818	GN	H	106.00	GEN ST PU697 M
J74715	3805 00 801 4999	K	9140 00 273 2377	CE	H	3.80	GRADER 220
J74852	3805 00 053 8448	K	9140 00 273 2377	CE	H	3.80	GRADER 12 WNTZD
J74852	3805 00 155 7093	K	9140 00 273 2377	CE	H	5.60	GRADER F1500M
J74852	3805 00 197 4184	K	9140 00 273 2377	CE	H	3.70	GRADER 12
J74852	3805 00 221 1802	K	9140 00 273 2377	CE	H	4.50	GRADER 116
J74852	3805 00 221 1803	K	9140 00 273 2377	CE	H	4.60	GRADER 4D 100
J74852	3805 00 223 9030	K	9140 00 273 2377	CE	H	4.70	GRADER 550
J74852	3805 00 223 9031	K	9140 00 273 2377	CE	H	2.90	GRADER 118 W/ATTC
J74852	3805 00 223 9037	K	9140 00 273 2377	CE	H	4.50	GRADER 402
J74852	3805 00 542 2995	K	9140 00 273 2377	CE	H	4.30	GRADER 4D WNTZD
J74852	3804 00 542 2996	K	9140 00 273 2377	CE	H	4.30	GRADER 4D
J74852	3805 01 018 2866	K	9140 00 273 2377	CE	H	5.20	GRADER RD HVY
J74852	3805 01 029 0139	K	9140 00 273 2377	CE	H	5.20	GRADER RD HVY
J74852	3805 01 064 3878	K	9140 00 273 2377	CE	H	5.20	GRADER RD HVY
J74886	3805 00 902 3083	K	9140 00 273 2377	CE	H	3.20	GRADER CAT MOL 112
J74886	3805 01 029 0140	K	9140 00 273 2377	CE	H	4.20	GRADER RD SEC
J74910	3805 00 995 4772	K	9140 00 273 2377	CE	H	5.00	GRADER RD
J74920	3805 00 782 5290	K	9140 00 273 2377	CE	H	2.70	GRADER RD AIR DROP

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNS CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTRY	2ND RUS		
J81750	2350 01 048 5920	S K	9140 00 273 2377	TV	H	6.40	18.00	8.60	INF FGT VEH OM2	
J95533	1425 00 937 3859	S L	9140 00 273 2377	TV	H	1.00	3.41	3.41	M48 GM STM1NCPTR	
J96694	2350 01 017 2113	S M	9140 00 273 2377	TV	H	1.00	5.20	13.00	GUN AIRDEF M163A1	
J96820	2350 00 049 4791	S M	9130 00 160 1818	TV	H	20.7113			GUN SPET40MM M42A1	
K04697	3895 00 014 0583	K	9140 00 273 2377	CE	H	.60			HAMMER P/D CD SLE	
K04834	3895 00 443 4696	K	9140 00 273 2377	CE	H	1.10			HAMMER PLDR MKT DA	
K04834	3895 00 756 7447	K	9140 00 273 2377	CE	H	1.10			HAMMER PLDR DE30	
K04834	3895 00 854 4150	K	9140 00 273 2377	CE	H	7.00			HAMMER PILE MDL 4	
K06067	2230 00 386 3696	B	9130 00 160 1818	OV	H	1.00			HAMMER SPIKE	
K24520	3895 00 062 7912	K	9130 00 160 1818	HG	H	1.30			HEATER PSM50	
K24520	3895 00 221 1763	K	9130 00 160 1818	HG	H	6.00			HEATER DS	
K24520	3895 00 634 9215	K	9130 00 160 1818	HG	H	6.00			HEATER SG-45T	
K24520	3895 00 836 5242	K	9130 00 160 1818	HG	H	6.00			HEATER SG-52A	
K24588	3895 00 099 5242	K	9130 00 160 1818	HG	H	15.00			HEATER BIT TR MT	
K24862	4520 00 001 7726	B	9130 00 160 1818	HG	H	4.00			HEATER MILH11049	
K24862	4520 00 086 7676	B	9130 00 160 1818	HG	H	4.00			HEATER 250	
K24862	4520 00 218 0808	B	9130 00 160 1818	HG	H	4.00			HEATER V8 3077C853	
K24862	4520 00 255 5051	B	9130 00 160 1818	HG	H	4.00			HEATER H250	
K24862	4520 00 448 0413	B	9130 00 160 1818	HG	H	4.00			HEATER V8 3077C860	
K24862	4520 00 856 5983	B	9130 00 160 1818	HG	H	4.00			HEATER V8 3077C861	
K24862	4520 00 937 6168	B	9130 00 160 1818	HG	H	4.00			HEATER VB 67-GFC3	
K24931	4520 00 223 3221	B	9130 00 160 1818	HG	H	5.00			HEATER BT400-40-1A	
K24931	4520 00 223 3221	B	9130 00 160 1818	HG	H	3.82			HEATER BT4	
K24931	4520 00 446 7314	B	9130 00 160 1818	HG	H	3.82			HEATER BT400-30	
K24931	4520 00 620 4055	B	9130 00 160 1818	HG	H	3.82			HEATER BT400-10	
K24931	4520 00 792 8257	B	9130 00 160 1818	HG	H	3.82			HTR DUCT TY400000B	
K24931	4520 00 915 7789	B	9130 00 160 1818	HG	H	3.82			HEATERBT4	
K24931	4520 00 980 3199	B	9130 00 160 1818	HG	H	3.82			HEATER PH-400	
K24931	4520 01 071 7191	B	9130 00 160 1818	HG	H	3.83			HEATER DUCT TYPE	
K25205	3895 00 066 6016	K	9140 00 273 2377	HG	H	6.00			HEATER H/O 2005	
K25342	4540 00 266 6835	B	9130 00 160 1818	HG	H	.45			HEATER IMM LQ FL	
K25342	4520 00 469 6593	B	9130 00 160 1818	HG	H	.45			HEATERM67IMMERSON	M
K25479	4550 00 266 6834	J	9140 00 273 2377	HG	H	2.00			HEATER IMM LOFL371	
K26301	4520 00 114 1055	H	9130 00 160 1818	HG	H	.75			HEATER UH68D	M
K26301	4520 00 280 1830	B	9130 00 160 1818	HG	H	.75			HEATER UH68E	M
K26301	4520 00 999 8523	B	9130 00 160 1818	HG	H	2.00			HEATER UH684	M
K26301	4520 01 050 5628	B	9130 00 160 1818	HG	H	.75			HEATER UH68F	M
K26301	4520 01 068 2968	B	9130 00 160 1818	HG	H	.75			HEATER MODEL P60A	M
K26849	4410 00 542 5656	M	9140 00 273 2377	HG	H	6.00			HEATER WTR FUEL M2	
K29660	1520 00 999 9821	H	9130 00 256 8613	AV	H	106.00			HOPTR ATTACK AH-1G	
K29694	1520 00 504 9112	H	9130 00 256 8613	AV	H	123.00			HOPTR ATTACK HA-15	
K29762	1520 00 804 3635	H	9130 00 256 8613	AV	H	106.00			HOPTR ATTACK TRNTH	
K30378	1520 00 633 6836	H	9130 00 256 8613	AV	H	482.00			HOPTR CGO TRANSCH4	

K30383	1520 00 990 2941	H	9130 00 256 8613	AV	H	478.80			HCPTP CGO TRANSCH4
K30449	1520 00 871 7308	H	9130 00 256 8613	AV	H	497.10			HCPTP MED LFT CH47
K30515	1520 00 964 9601	H	9130 00 256 8613	AV	H	656.70			HCPTC CGO TRANSCH5
K30516	1520 00 113 5776	H	9130 00 256 8613	AV	H	716.40			HCPTP CGO CH54B
K30548	1520 00 368 8442	H	9130 00 256 8613	AV	H	93.00			HCPTP ECM
K30645	1520 00 918 1523	H	9130 00 256 8613	AV	H	29.00			HCPTP OBSN CM-6A
K31042	1520 00 169 7137	H	9130 00 256 8613	AV	H	33.70			HCPTP OBSN CH-58A
K31153	1520 00 758 0289	H	9130 00 179 1125	AV	H	15.10			HCPTP PRIM TRNRT5
K31786	1520 00 859 2670	H	9130 00 256 8613	AV	H	114.50			HCPTP UTILITY UH-1
K31795	1520 00 087 7637	H	9130 00 256 8613	AV	H	106.00			HCPTP UTILITY UH-1
K31804	1520 00 809 2631	H	9130 00 256 8613	AV	H	106.00			HCPTP UTILITY UH-1
K32293	1520 01 035 0266	H	9130 00 256 8613	AV	H	142.00			HCPTP UTIL UH60A
K54707	3835 00 892 5157	B	9140 00 273 2377	SG	H	3.35			HOSELINE OUTFIT FH
K56981	2350 01 041 4590	S M	9140 00 273 2377	TV	H	2.20	12.50	14.30	HOW SP 8IN M110A2
K57667	2350 01 031 0586	S M	9140 00 273 2377	TV	H	2.20	11.80	16.10	HOW 155MM M109A2
K57667	2350 01 031 8851	S M	9140 00 273 2377	TV	H	2.20	11.80	16.10	M109A3 HOW SP 155MM
K90188	4940 00 077 1638	K	9130 00 160 1818	SV	H	.15			M185A3 INST REP SH
K90188	4940 00 300 0306	K	9130 00 160 1818	SV	H	.21			M185 INST REP SH
K90188	4940 00 973 3995	K	9130 00 160 1818	SV	H	.21			M185A1 INST REP SH
K90188	4940 00 987 8799	K	9130 00 160 1818	SV	H	.15			M185A2 INST REP SH
L21300	3895 00 252 1183	K	9130 00 160 1818	CE	H	4.50			KETTLE KD 750 GAL
L21437	3895 00 051 3834	K	9120 00 160 1818	CE	H	1.25			KETTLE UPS 175-S
L21437	3895 00 066 6015	K	9130 00 160 1818	CE	H	1.25			KETTLE US84HD3
L21437	3895 00 247 7593	K	9130 00 160 1818	CE	H	1.25			KETTLE 7ZPSA
L21437	3895 00 247 7594	K	9130 00 160 1818	CE	H	1.25			KETTLE 84HD3
L21437	3895 00 351 2354	K	9130 00 160 1818	CE	H	1.25			KETTLE GS 1901
L21437	3895 00 442 9741	K	9130 00 160 1818	CE	H	1.25			KETTLE WHITE FM 3
L21437	3895 00 542 3260	K	9130 00 160 1818	CE	H	1.25			KETTLE 7ZPSA9
L21437	3895 00 832 6231	K	9130 00 160 1818	CE	H	1.25			KETTLE AERIO/L2ZPSA
L21447	3895 00 571 6414	K	9130 00 160 1818	CE	H	6.00			KETTLE HTG 350 GAL
L36602	1905 00 153 6695	B	9140 00 273 2377	AB	H	25.00			LCM-6
L36739	1905 00 267 1097	B	9140 00 273 2377	AB	H	35.00			LCMB
L36739	1905 00 935 6057	B	9140 00 273 2377	AB	H	34.16			LCM 8 MOD1
L36876	1905 00 168 5764	B	9140 00 273 2377	AB	H	38.00			LAND CRAFT UTIL 16
L36876	1905 00 217 2293	B	9140 00 273 2377	AB	H	40.00			LCU 1466 115FT
L36876	1905 01 009 1056	B	9140 00 273 2377	AB	H	34.00			LOADING CRAFT UTIL
L36876	1905 01 031 6077	B	9140 00 273 2377	AB	H	34.00			LCU 1466 115FT
L36989	1905 01 154 1191	B	9140 00 273 2377	AB	H	38.00			LAND CRAFT UTILITY
L43390	5420 00 542 3052	K	9140 00 273 2377	TO	K	8.8798			LAUN-M48A2 CHASSIE
L43664	5420 00 889 2020	K	9140 00 273 2377	TV	H	2.00	26.53	18.79	LAUN M60 SERIES CH
L43664	5420 01 076 6096	K	9140 00 273 2377	TV	H	2.00	26.53	18.79	LAUN M48A5 CHASSIE
L44644	1440 00 937 0938	L	9140 00 273 2377	TO	K	1.6343		8.60	LAUNCH GM M752
L44894	1055 01 092 0596	L	9140 00 273 2377	TV	H	1.28			ARMR VEH LAUN M270
L48315	3510 00 169 4735	B	9140 00 273 2377	SG	H	1.09			LAUNDRY UNIT 60LB
L48315	3510 00 753 2895	B	9140 00 273 2377	SG	H	1.09			LAUNDRY UNIT
L48315	3510 00 782 5294	B	9140 00 273 2377	SG	H	1.09			LAUNDRY UNIT EL191
L66710	2305 01 061 6230	B	9130 00 256 8613	AB	H	260.00			AIRCUSH VEHLACV-30

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTRY	2NDROD		
L67234	1930 00 710 5728	B	9140 00 273 2377	AB	M	15.00			LIGHTER AMPH 5 TON	
L67371	1930 00 710 5729	B	9140 00 273 2377	AB	H	28.10			AMPHIBIOUS LIGHTER	
L67508	1930 00 392 2981	B	9140 00 273 2377	AB	H	33.00			LIGHTER AMPH LARC	
L67645	1930 00 705 9230	B	9140 00 273 2377	AB	H	65.00			LIGHTER MK1-D-5002	
L76282	3805 00 074 6378	K	9140 00 273 2377	CE	H	7.40			LOADED SCOOP 10.5K	
L76305	3805 00 438 1463	K	9140 00 273 2377	CE	H	3.30			LDR 1/2 TO 3 CY	
L76315	3805 00 602 5006	K	9140 00 273 2377	CE	H	5.00			LDR RK BUCH CASE17	
L76315	3805 01 052 9042	K	9140 00 273 2377	CE	H	11.00			LDR SCP DED 4-1/2CY	
K76321	3805 00 602 5013	K	9140 00 273 2377	CE	H	5.00			LDR GP BUCH CASE1758	
L76321	3805 01 052 9043	K	9140 00 273 2377	CE	H	11.00			LDR SCP DED 5 CY	
L76328	3805 00 438 1484	K	9149 00 273 2377	CE	H	3.00			LDR 1-1/2 CY	
L76351	3805 00 679 6915	K	9140 00 273 2377	CE	H	4.00			LOADER 85A-M	
L76351	3805 00 761 1640	K	9140 00 273 2377	CE	H	4.00			LOADR DSL D 1-1/2CY	
L76488	3805 00 678 1735	K	9140 00 273 2377	CE	H	5.90			LOADER 175A-M	
L76522	3805 00 438 1464	K	9140 00 273 2377	CE	H	6.50			LDR 3-1/4 TO 5 CY	
L76556	3805 00 051 9359	K	9140 00 273 2377	CE	H	5.00			LOADER SCO 645M	
L76556	3805 00 169 4711	K	9140 00 273 2377	CE	H	5.30			LDR SCP IICASE MW2 4B	
L76556	3805 00 253 0627	K	9140 00 273 2377	CE	H	5.00			LDR SCP J I CASEMW24	
L76556	3805 00 617 7091	K	9140 00 273 2377	CE	H	5.70			LDR SCP A/C645M	
L76556	3895 01 030 2816	K	9140 00 273 2377	CE	H	5.70			LOADER SCOOP JI CMW24	
L76556	3805 01 150 4814	K	9140 00 273 2377	CE	H	7.00			LDR SCP 21/2 CU YD	
L76625	3805 00 803 2671	K	9140 00 273 2377	CE	H	5.00			LOADER H-90M	
L76625	3805 00 803 2672	K	9140 00 273 2377	CE	H	5.90			LOADER H-90M WNTNRZ	
L76625	3805 00 866 3849	K	9140 00 273 2377	CE	H	5.90			LOADER 175A-M23	
L76625	3805 00 995 3236	K	9140 00 273 2377	CE	H	5.90			LOADER H-900M	
L76659	3805 00 721 9453	K	9130 00 160 1818	CE	H	1.40			LDR 3/8 CY	
L76693	3805 00 900 8546	K	9140 00 273 2377	CE	H	5.30			LDR SCP 2-1/2 CYD	
L76693	3805 00 064 5800	K	9140 00 273 2377	CE	H	5.70			LDR A/C TL645WRROPS	
L76725	3805 00 857 3599	K	9140 00 273 2377	CE	H	3.80			LOADER SCP 1-1/2 CYD	
L76738	3805 00 438 1483	K	9140 00 273 2377	CE	H	5.40			LDR 2-1/2 CY	
L76750	1450 00 937 0939	S L	9140 00 273 2377	TV	H	1.6343			LDR TRSP GM M688A1	
L76762	1450 00 066 8873	S L	9130 00 160 1818	TV	K	0.1367			LDR TRSP GM M501A3	
L76762	1450 00 768 7046	S L	9130 00 160 1818	TV	K	0.1367			LDR TRSP GM M501A2	
L79673	2210 00 773 2510	B	9140 00 273 2377	OV	H	26.50			LOCOMOTIVE DMSITFS	
L80221	2210 00 825 5050	B	9140 00 273 2377	OV	H	6.84			LOCOMOTIVE 10T	
L80358	2210 00 112 8508	B	9140 00 273 2377	OV	H	62.85			LOCOMOTIVE 539S	
L80355	2210 00 262 0751	B	9140 00 273 2377	OV	H	75.42			LOCOMOTIVE H1244	120T
L80358	2210 00 371 7535	B	9140 00 273 2377	OV	H	50.56			LOCOMOTIVE SWS	
L80358	2210 00 554 0785	B	9140 00 273 2377	OV	H	50.00			LOCOMOTIVE GP7L	
L80358	2210 00 819 9320	B	9140 00 273 2377	OV	H	41.48			LOCOMOTIVE ALCO	
L80495	2210 00 804 3610	B	9140 00 273 2377	OV	H	25.00			DAV BPSS DI7000	
L80495	2210 00 821 1135	B	9140 00 273 2377	OV	H	25.00			45 TON GE HH1	
L80632	2210 00 819 9318	B	9140 00 273 2377	OV	H	13.42			LOCOMOTIVE RS4TC	

L80724	2210 00 804 3614	B	9140 00 273 2377	OV	H	29.60	LOCOMOTIVE NMBIS
L80724	2210 00 804 3615	B	9140 00 273 2377	OV	H	29.60	LOCOMOTIVE 1125708
L80724	2210 00 820 5451	B	9140 00 273 2377	OV	H	31.42	LOCOMOTIVE L1600
L80769	2210 00 270 1354	B	9140 00 273 2377	OV	H	62.85	LOCOMOTIVE 127TN
L80769	2210 00 554 0786	B	9140 00 273 2377	OV	H	62.85	LOCOMTV 131TN
L80769	2210 00 814 5291	B	9140 00 273 2377	OV	H	50.00	LOCOMTV 19B238G2
L80769	2210 00 815 3521	B	9140 00 273 2377	OV	H	50.00	LOCOMTV 19B232G1
L80769	2210 00 819 9317	B	9140 00 273 2377	OV	H	50.00	LOCOMTV MRS1M/C729
L80902	3805 01 066 7763	K	9140 00 273 2377	CE	H	10.00	LOADER SCOOP 3-1/2 T 60 CY
L85283	4930 00 017 9167	B	9130 00 160 1818	SG	H	.45	LUBSVCUNIT901765-1
L85283	4930 00 548 2766	B	9130 00 160 1818	SG	H	.45	LUB-SVC UT MT ENG
L85283	4930 00 857 7160	B	9130 00 160 1818	SG	H	.45	LUB-SVC UNIT 251-3
L85283	4930 00 892 5067	B	9130 00 160 1818	SG	H	.45	LUB-SVC UT 251-437
L85283	4930 00 935 4451	B	9130 00 160 1818	SG	H	.45	LUBSVC UNIT ENG-3
L93797	3830 00 263 2978	K	9130 00 160 1818	SV	H	1.00	MAGNETIC SWEEPER 3MAG 36
M07888	3610 00 294 7830	K	9130 00 160 1818	WV	M	3.6538	MAP LO SEC TOPO
M08025	6675 00 526 4788	B	9130 00 160 1818	SG	H	6.00	MAP REV SECT TOPO
M32780	3895 00 066 6017	K	9140 00 273 2377	CE	H	26.00	MELTER ASPHALT 18BAM
M32780	3895 00 839 5586	K	9140 00 273 2377	CE	H	26.00	MELTER ASPHALT TH 12-750
M32780	3895 00 059 0129	K	9140 00 263 2377	CE	H	26.00	MELTER ASPHALT MT-12
M53877	3895 00 221 1807	K	9140 00 273 2377	CE	H	6.50	MIXER BIT N/SLF LD
M54004	3895 00 611 6258	K	9140 00 273 2377	CE	H	6.50	MIXER BIT TRK MTD
M54076	3895 00 438 1480	K	9130 00 160 1818	CE	H	.70	MIXER CONCRETE
M54083	3895 00 438 1479	K	9130 00 160 1818	CE	H	1.00	MIXER CONCRETE 6 CF
M54151	3895 00 062 4628	K	9130 00 160 1818	CE	H	1.25	MXR CON JAEGER 16-S4
M54151	3895 00 444 1531	K	9130 00 160 1818	CE	H	1.25	MXR CON KWIK MIX 16-S
M54151	3895 00 807 7985	K	9130 00 160 1818	CE	H	1.25	MXR CON CHAIN BLT 16-S
M54151	3895 00 835 4512	K	9130 00 160 1818	CE	H	1.50	MXR CON SMITH MOL4
M54151	3895 00 985 5335	K	9130 00 160 1818	CE	H	1.25	MXR CON CNST MAC 16-SM
M54630	3895 00 438 1486	K	9140 00 273 2377	WV	M	0.1243	MIXER CONCRETE 5-7CF
M54654	3895 00 615 8814	K	9140 00 273 2377	WV	M	0.0808	MIXER CONCRETE 1-4CF
M55384	3895 00 883 0437	K	9140 00 273 2377	CE	M	3.00	MXR FWD MDL 82-1171
M55384	3895 00 987 5536	K	9140 00 273 2377	CE	H	2.75	MXR REX CHN BLT HD
M57048	3895 00 936 8613	K	9140 00 273 2377	CE	H	5.00	MIXING PLT ASPH DS
M72933	2340 01 090 7748	K	9130 00 160 1818	WV	K	0.0186	MOTORCYCLE 1E4101
M72922	2340 01 090 7749	K	9130 00 160 1818	WV	K	0.0186	MOTORCYCLE 1E4102
M72933	2340 01 090 7750	K	9130 00 160 1818	WV	K	0.0249	MOTORCYCLE 1E4103
M83242	6675 00 526 4836	B	9140 00 273 2377	SV	H	6.00	MULTIPLXSCTDPOMAP
N34334	2805 00 294 3598	B	9130 00 160 1818	AB	H	5.00	OB MTR RDM12 25HHP
N34334	2805 00 376 9171	B	9130 00 160 1818	AB	H	5.00	OB MTR RDM10 25HHP
N34334	2805 00 376 9172	B	9130 00 160 1818	AB	H	5.00	OB MTR RDM11 25HHP
N34334	2805 00 646 7987	B	9130 00 160 1818	AB	H	5.00	OB MTRG35912 25HHP
N34334	2805 00 826 0894	B	9130 00 160 1818	AB	H	5.00	OB MTRG35691 25HHP
N75124	3895 00 057 8715	K	9130 00 160 1818	CE	H	.75	PAVG MACH
N75124	3895 00 281 1818	K	9130 00 160 1818	CE	H	2.75	PAVG MACH B-G 879

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						IDL/AV	XCNTRY	2NDORDS		
N75124	3895 00 821 6951	K	9130 00 160 1818	CE	H	2.75			PAYS MACH B-G 879-A	
N75124	3895 01 063 7891	K	9130 00 160 1818	CE	H	6.00			PAVING MACHINE BIT	
N87460	6675 00 526 4631	B	9130 00 160 1818	SG	H	6.00			PHOTOMPG SEC TOPO	
N87960	3610 00 691 1707	B	9130 00 160 1818	SG	H	6.00			PHOTOMECH PRO SEC	
N91371	3895 00 254 2802	K	9130 00 160 1818	CE	H	3.50			PLEDRIVING RIG SKI	
P03804	3610 00 294 7829	B	9130 00 160 1818	SG	H	6.00			PLATE FROC SEC 10	
P11866	3820 00 950 8584	K	9140 00 273 2377	CE	H	3.53			PNEU TL COMP	
P12140	3820 00 295 9536	K	9140 00 273 2377	CE	H	10.00			PNEU TL OUTFIT 600 CFM	
P27805	6115 00 937 5046	B	9140 00 273 2377	GN	H	4.50			POWER PLT/MJQ-9	
P27819	6115 00 056 7906	B	9140 00 273 2377	SG	H	6.00			POWER PLANT	
P27819	6115 00 394 9582	B	9140 00 273 2377	GN	H	6.00			PWRPLT, AN/MJQ 10A	
P27821	6115 00 134 8485	B	9140 00 273 2377	SG	H	20.00			POWER PLNT AN/MJQ	
P27823	6115 00 257 1602	B	9140 00 273 2377	GN	H	12.00			PWRPLT, AN/MJQ12A	
P27823	6115 00 464 4194	B	9140 00 273 2377	SG	H	12.00			PWR PLANT AN-MJ012	
P28039	1450 00 005 4878	L	9140 00 273 2377	SV	H	25.00			PWR STAT GM TRANS	M
P28039	1450 00 308 5265	L	9140 00 273 2377	SV	H	25.00			PWR STAT GM TRANS	M
P28075	6115 00 400 7591	B	9140 00 273 2377	GN	H	3.00			PWR PLT AN/MJQ-15	
P28176	1450 00 541 6142	L	9130 00 160 1818	SG	H	6.00			PWR STAT GM SYS TM	
P28176	1450 00 731 8190	L	9130 00 160 1818	SG	H	6.00			PWR STAT GM TM	
P28176	1450 01 054 7197	L	9140 00 273 2377	SV	H	1.20			PWR STAT GM SYS TM	M
P41832	6115 00 033 1395	B	9140 00 273 2377	GN	H	1.14			PWR PLT AN/MJQ16	
P44377	4920 00 938 8363	H	9130 00 160 1818	SV	H	6.00			PWR UN AUX ACFT GE	
P44627	1730 01 144 1897	B	9130 00 256 8613	SG	H	12.00			AV GR POWER UNIT	
P45003	6115 00 134 0825	B	9130 00 256 8613	SG	H	35.00			POWER UNIT PPU85-4	
P45003	6115 00 937 0929	B	9130 00 256 8613	SG	H	35.00			POWER UNIT PPU85-5	
P45003	6115 00 937 0929	B	9130 00 256 8613	SG	H	35.00			PRESS SEC REPRO T	
P50041	3610 00 204 3137	B	9130 00 160 1818	SG	H	6.00			PRT PLT 4 COMP	
P61528	3610 00 889 3262	B	9130 00 160 1818	SG	H	6.00			PROP UB ON DLS 165	
P78995	2010 00 278 0793	B	9140 00 273 2377	SG	H	10.00			PROP UN NA165-154	
P78995	2010 00 410 4442	B	9140 00 273 2377	SG	H	10.00			PUMP CENTRE MILP52	
P90386	4320 00 080 2059	B	9140 00 273 2377	SG	H	4.09			PUMP BARNES US6ACG	
P90610	4320 00 150 6116	B	9130 00 160 1818	SG	H	.50			PUMP KENCO 114MX1A	
P90610	4320 00 900 8544	B	9130 00 160 1818	SG	H	.50			PUMP BARNES MDL 10	
P90934	4320 00 820 0700	B	9130 00 160 1818	SG	H	.68			PUMP BARNES 17570	
P91756	4320 00 752 9466	B	9130 00 160 1818	SG	H	.50			PUMP CTRF GD FM125	
P92030	4320 00 542 3347	B	9130 00 160 1818	SG	H	.75			PUMP CTRF GD FM170	
P92167	4320 00 082 6004	B	9130 00 160 1818	SG	H	15.60			PUMP PEERLESS USPL	
P92852	4320 00 203 2546	B	9130 00 160 1818	SG	H	15.60			PUMP RIENER GP-75	
P92852	4320 00 389 6857	B	9130 00 160 1818	SG	H	15.60			PUMP BARNES CE4P4	
P92852	4320 00 542 4037	B	9130 00 160 1818	SG	H	4.06			PUMP CONSOL DSL 40	
P92852	4320 00 691 0967	B	9130 00 160 1818	SG	H	4.06			PUMP CARVER 4 WHIS	
P92989	4320 00 810 7310	B	9130 00 160 1818	SG	H	4.06			PUMP CARVER 4 WHIS	
P92989	4320 00 830 5344	B	9130 00 160 1818	SG	H	4.06				

P92989	4320 00 935 1618	B	9130 00 160 1818	SG	H	4.06		PUMP RUPP E13-4A08
P93263	4320 00 203 2609	B	9130 00 160 1818	SG	H	4.09		PUMP RUPP 06M260
P93263	4320 00 409 8678	B	9130 00 160 1818	SG	H	4.09		PUMP CTRF US67-CCG
P93263	4320 00 563 1855	B	9130 00 160 1818	SG	H	4.09		PUMP RENIER GP-57
P93263	4320 00 595 3253	B	9130 00 160 1818	SG	H	4.09		PUMP REINER GP-58
P93263	4320 00 630 4434	B	9130 00 160 1818	SG	H	4.09		PUMP CARVER6HJR57
P93263	4320 00 715 7599	B	9130 00 160 1818	SG	H	4.09		PUMP KRUIZ-ROOT BAL
P93263	4320 00 929 0681	B	9130 00 160 1818	SG	H	4.09		PUMP CARVER K906MP
P93263	4320 00 968 6264	B	9130 00 160 1818	SG	H	4.09		PUMP CARVER K906
P93400	4320 00 063 7368	B	9130 00 160 1818	SG	H	15.60		PUMP REINER C-P 11
P93400	4320 00 122 9642	B	9130 00 160 1818	SG	H	15.60		PUMP CENTRF IF M71
P93400	4320 00 203 0819	B	9130 00 160 1818	SG	H	15.60		PUMP BARNES CE-6-P
P93400	4320 00 709 2807	B	9130 00 160 1818	SG	H	15.60		PUMP A/C 501112520
P93400	4320 00 988 1192	B	9130 00 160 1818	SG	H	15.60		PUMP EQUIP CO PR-1
P94290	4320 00 935 1619	B	9130 00 160 1818	SG	H	2.04		SHLEYER36MSPS30116
P94359	4320 00 440 9808	B	9130 00 160 1818	SG	H	6.08		PUMP CARVER KN6HS
P94359	4320 00 490 1859	B	9130 00 160 1818	SG	H	6.08		PUMP BARNES
P94359	4320 00 678 1736	B	9130 00 160 1818	SG	H	8.00		PUMP CARVER KN8L
P94359	4320 00 812 3707	B	9130 00 160 1818	SG	H	6.08		PUMP CHNBLT REX 6L
P94359	4320 00 878 1907	B	9130 00 160 1818	SG	H	4.00		PUMP CENTR
P96503	4320 00 493 1861	B	9130 00 160 1818	SG	H	3.35		PUMP PEERLESS 2791
P96503	4320 00 649 9010	B	9130 00 160 1818	SG	H	3.35		PUMP PRLS 52
P96845	4320 00 407 2583	B	9130 00 160 1818	SG	H	2.45		BARNES MFG US36ACG
P96845	4320 00 916 9172	B	9130 00 160 1818	SG	H	2.45		GORMAN RUP 84C154A
P97051	4320 00 069 8494	B	9130 00 160 1818	SG	H	3.35		PUMP GRO4A123MWG4D
P97051	4320 00 195 4914	B	9130 00 160 1818	SG	H	3.35		PUMP BARNES
P97051	4320 00 600 7590	B	9130 00 160 1818	SG	H	3.35		PUMP 04A12CMVG4D
P97051	4320 00 691 1071	B	9130 00 160 1818	SG	H	3.35		PUMP G-R04A12 MG D
P97119	4320 01 141 5154	B	9140 00 273 2377	SG	H	2.20		PUMP RUPP REGULATE
P97501	4320 01 092 3551	B	9140 00 273 2377	SG	H	2.20		PUMP RUPP UNREG
R07085	2230 00 262 0759	B	9130 00 160 1818	OV	H	2.50		RR MOTOR CAR 4 MAN
R07633	2230 00 262 0762	B	9130 00 160 1818	OV	H	2.50		RR MOTOR CAR 4 MAN
R14154	7360 00 082 2153	E	9130 00 160 1818	SG	H	.50		RANGE OUTFIT M 59
R39883	581.1 01 095 1875	K	9140 00 273 2377	TU	K	0.1056		TEAM PACKAGE SQ103A
R50544	2350 00 439 6242	S M	9140 00 273 2377	TV	H	2.20	12.50	M578 RECOVER FT
R50681	2350 00 122 6826	S K	9140 00 273 2377	TV	H	2.00	36.76	REC VEH FT M88A1
R50681	2350 00 678 5772	S K	9130 00 160 1818	TV	H	2.00	36.76	M88 REV VEH FT MED
R52776	6675 00 526 4629	B	9130 00 160 1818	SG	H	6.00	25.54	REC ROPO MAPNG SET
R61428	4110 00 926 4251	B	9130 00 160 1818	SG	H	.95		REFRIG UNIT 1000B
R61428	4110 01 010 5970	B	9130 00 160 1818	SG	H	1.00		REF UNIT RMPJ1-10G
R61428	4110 01 074 5175	B	9130 00 160 1818	SG	H	1.00		REF UNIT F1000 RG2
R65544	4110 00 026 0419	B	9130 00 160 1818	SG	H	4.50		REF UNIT KECO FSG
R65544	4110 00 360 0157	B	9130 00 160 1818	SG	H	4.50		REF UNIT TMPMOQ15G
R65544	4110 00 911 9208	B	9130 00 160 1818	SG	H	4.50		REF UNIT THRMO Q5G
R65566	4110 00 933 6114	B	9130 00 150 1818	SG	H	.49		REFRIG DIXIE NORCO
R65544	4110 01 076 1991	B	9130 00 160 1818	SG	H	1.00		REF UNIT ERU-5G
R65681	4110 00 186 3485	B	9130 00 160 1818	SV	H	1.00		REF LEAR-SIEGLER 1

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTRY	2NDROD		
R65681	4110 00 197 4980	B	9130 00 160 1818	SG	H	1.00			REF UNITROP9000MOD	
R65681	4110 00 588 9196	B	9130 00 160 1818	SG	H	1.00			REF UNIT THRMO Q9A	
R65681	4110 00 933 5457	B	9130 00 160 1818	SV	H	.95			REF UNIT TARMO Q19	
R65681	4110 00 935 1512	B	9130 00 160 1818	SV	H	.95			REF UNIT RDMSH RGP	
R65681	4110 00 967 9762	B	9130 00 160 1818	SG	H	1.00			REF UNIT THRMO Q19	
R65681	4110 00 987 8578	B	9130 00 160 1818	SG	H	1.00			REF UNIT DHM BUPTG	
R65681	4110 00 999 1900	B	9130 00 160 1818	SG	H	1.00			REF UNIT DHM-B	
R65818	4110 00 360 0160	B	9130 00 160 1818	SG	H	1.50			REF UNIT UNIV OEC	
R65818	4110 00 391 3207	B	9130 00 160 1818	SG	H	1.50			REF UNIT THRM CN N	
S03225	3820 00 985 2274	K	9140 00 273 2377	SG	H	12.01			ROCK DRILLING EQP	
S10682	3895 00 252 5276	K	9130 00 160 1818	CE	H	2.50			ROLLERESSIK VR55TM	
S10682	3895 00 902 3112	K	9130 00 160 1818	CE	H	2.50			RLR RROS HOL VP-4D	
S11033	3895 00 490 0560	K	9130 00 160 1818	CE	H	1.5			ROLLER MOTORIZED	
S11050	3895 00 935 7909	K	9130 00 160 1818	CE	H	3.00			ROLLER MOTORIZED 2RLS	
S11050	3895 01 077 7823	K	9130 00 160 1818	CE	H	3.00			ROLLER MOTORIZED 2M	
S11054	3895 01 173 1728	K	9130 00 160 1818	CE	H	4.00			ROLLER MOTORIZED TO 21	
S11059	3895 01 151 4429	K	9130 00 160 1818	CE	H	3.50			ROLLER MOTORIZED 4T06T	
S11068	3895 00 192 7594	K	9130 00 160 1818	CE	H	3.00			RLR GST MDL 1504	
S11068	3895 00 194 8536	K	9130 00 160 1818	CE	H	3.00			RLR BFLO SPFLD KT-168	
S11068	3895 00 221 1632	K	9130 00 160 1818	CE	H	3.00			RLR GALLON T5-G	
S11068	3895 00 842 5326	K	9130 00 160 1818	CE	H	3.00			RLR HUBER T58M BS	
S11068	3895 00 935 7943	K	9130 00 160 1818	CE	H	2.75			RLR HUBER T58M QXL	
S11068	3895 00 954 8181	K	9130 00 160 1818	CE	H	3.00			RLR GALLON T5-8G	
S11205	3895 00 641 6414	K	9130 00 160 1818	CE	H	3.50			RLR GALLON 379-G	
S11273	3895 00 917 6611	K	9130 00 160 1818	CE	H	7.20			RLR MTZDG KX25	
S11342	3895 00 194 8555	K	9130 00 160 1818	CE	H	6.80			RLR GALLON CHF C G	
S11479	3895 00 194 8551	K	9130 00 160 1818	CE	H	3.50			RLR GALLON CHIEF	
S11479	3895 00 223 8394	K	9130 00 160 1818	CE	H	3.60			RLR BFLO-SPFLD VM-310	
S11479	3895 00 542 4599	K	9130 00 160 1818	CE	H	3.60			RLR ROLOMATIC	
S11479	3895 00 952 5840	K	9130 00 160 1818	CE	H	3.75			RLR HUBER WRCO E1012M	
S11616	3895 00 134 8154	K	9130 00 160 1818	CE	H	5.00			RLR HUBER E1012	
S11616	3895 00 255 5054	K	9130 00 160 1818	CE	H	3.50			RLR GEN STL TANK 1503	
S11616	3895 00 902 8455	K	9130 00 160 1818	CE	H	5.00			RLR HUBER E-1012-M	
S11616	3895 00 997 6099	K	9130 00 160 1818	CE	H	3.75			RLR HUBER E1012MR	
S11650	3895 00 250 9553	K	9140 00 273 2377	CE	H	4.00			ROLL MOT PNEU TIRE	
S11684	3895 00 832 6232	K	9130 00 160 1818	CE	H	6.50			RLRMITZDBROSSP2800	
S11684	3895 00 902 3111	K	9130 00 160 1818	CE	H	6.50			RLR BROS-P-54-B	
S11701	3895 00 457 6126	K	9140 00 273 2377	SG	H	7.00			ROLL MOT PNEU TIRE	
S11711	3895 00 578 0372	K	9130 00 160 1818	CE	H	3.50			RLR MTR HYS C350BD	
S11793	3895 01 013 3630	K	9130 00 160 1818	CE	H	11.00			RLRPNEUHYSTERC530A	
S12916	3895 01 012 8875	K	9140 00 273 2377	SG	H	6.00			ROLLER VEH SELF PR	
S12916	3895 01 075 2823	K	9130 00 160 1818	CE	H	3.80			RLR VIBRATORY	
S34508	3895 01 062 6939	K	9130 00 160 1818	CE	H	1.20			SAW CLIPPER 122375	

S34508	3895 01 488 0612	K	9130 00 160 1818	CE	H	1.06			SAW GREGORY C3000
S35741	3695 00 679 6914	E	9130 00 160 1818	SG	H	1.00			SAW CHAIN
S37385	3220 00 837 9926	B	9130 00 160 1818	SG	H	16.00			SAW CIRCTBL SM GASD
S40029	3210 00 115 0140	B	9140 00 273 2377	SG	H	13.00			SAWMILL MTRP0568-1
S40029	3210 00 790 2174	B	9140 00 273 2377	SG	H	13.00			SAWMILLCIRD0601NBL
S56246	3805 01 153 1854	K	9140 00 273 2377	CE	H	7.00			SCRAPER EARTH SP
S71613	2330 00 255 8065	B	9130 00 160 1818	SG	H	1.50			STLR BROWN GST-120
S71613	2330 00 255 9350	B	9130 00 160 1818	SG	H	1.50			STLR ANDREWS MIL 2
S71613	2330 00 289 6798	B	9130 00 160 1818	SG	H	1.50			STLR THOMPSON M349
S71613	2330 00 351 9916	B	9130 00 160 1818	SG	H	1.50			STLR STEEL PROD AA
S71613	2330 00 554 8676	B	9130 00 160 1818	SG	H	1.50			STLR FREUHAUF M349
S71613	2330 00 892 5057	B	9130 00 160 1818	SG	H	1.50			STRL STEVENS M349A
S71613	2330 00 973 2230	B	9130 00 160 1818	SG	H	1.50			STLR KENTUCKY M349
S71613	2330 00 999 3591	B	9130 00 160 1818	SG	H	1.00			STLR M349A4
S79045	1040 00 740 1152	M	9140 00 273 2377	SG	H	.17			FLAME THROWER
T00474	4240 00 854 4144	M	9130 00 160 1818	SG	H	2.00			M51 SHELTER
T05028	2320 01 123 2665	K	9140 00 273 2377	WV	K	0.0684			TRK UTILCUCV M1009
T05096	2320 01 107 7153	K	9140 00 273 2377	WV	K	0.0497			WEAPONS CARRXM966
T0543	2320 01 146 7193	K	9140 00 273 2377	WV	K	0.0435			TRK UTILITY M1037
T10549	4940 01 006 3229	M	9140 00 273 2377	SG	H	3.50			SHOP EQUIP
T10549	4940 00 165 4021	M	9140 00 273 2377	SG	H	3.50			S/EQ PRSM-68
T10549	4940 00 165 4024	M	9140 00 273 2377	SG	H	3.50			S/EQ ENG-43-59
T10549	4940 00 287 4894	M	9140 00 273 2377	SG	H	3.50			S/EQ MILS 45538
T10549	4940 00 497 6412	M	9140 00 273 2377	SG	H	3.50			S/EQ MED-1952
T10549	4940 00 497 6413	M	9140 00 273 2377	SG	H	3.50			S/EQ SG PRSM-61
T13169	2350 01 061 2306	S K	9140 00 273 2377	TV	H	2.00	26.58	18.79	M60A3 TANK TTS
T13374	2350 01 061 2445	S K	9140 00 273 2377	TV	H	10.80	56.60	44.64	M1 TNK 105MM
T34437	2420 01 160 2754	K	9140 00 273 2377	CE	H	5.00			TRAC WHL DSL EXACV
T38660	2310 01 123 2666	K	9140 00 273 2377	WV	K	0.0373			TRKAMB CUCV M1010
T38707	2310 01 111 2275	K	9140 00 273 2377	WV	K	0.0497			TRK AMB M996
T38844	2310 01 111 2274	K	9140 00 273 2377	WV	K	0.0497			TRK AMB M997
T39518	2320 01 097 0260	K	9140 00 273 2377	WV	K	0.2672			TRK CGO TACT M977
T39586	2320 01 100 7673	K	9140 00 273 2377	WV	K	0.2672			TRK CGO TACT
T39654	2320 01 097 0261	K	9140 00 273 2377	WV	K	0.2672			TRK CGO TACT MB985
T42725	3895 01 028 4391	K	9130 00 160 1818	CE	H	1.25			TRK MXR CON M919
T48941	3930 01 082 3758	K	9140 00 273 2377	WV	K	0.2299			TRK CONT MDL 9888
T48944	3930 01 158 0849	K	9140 00 273 2377	MH	H	5.00			TRK FL 6000 LHS R1
T49119	3930 01 054 3833	K	9140 00 273 2377	MH	H	8.50			TRK LFT 10000 LHS
T49255	3930 01 076 4237	K	9140 00 273 2377	MH	H	1.30			TRK LFT DSL M4K
T53498	2320 01 044 0333	K	9130 00 160 1818	WV	K	0.0621			TRK MAINT TELEM888
T53858	2320 00 000 0114	K	9130 00 160 1818	WV	K	0.0621			TRK MAINT TFL M876
T58161	2320 01 097 0249	K	9140 00 273 2377	WV	K	0.2983			TRK TANK FUEL M978
T59117	2320 01 099 6421	K	9140 00 273 2377	WV	K	0.2983			TRUCK TRAC M983
T59278	2320 01 099 6426	K	9140 00 273 2377	WV	K	0.2983			TRK CGO TRCK M977
T59346	2320 01 123 2671	K	9140 00 273 2377	WV	K	0.0621			TRKCG05/41 M1008A1
T59414	2320 01 127 5077	K	9140 00 273 2377	WV	K	0.0621			SHELTER CUCV M1028
T59482	2320 01 123 6827	K	9140 00 273 2377	WV	K	0.0373			TRK CGO CUCV M1008

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMO	FUEL MSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						IDL/AV	XCNTY	2NDORDS		
T60353	2320 01 044 8376	K	9140 00 273 2377	WV	K	0.1305			TRUCK TRAC M878	
T60353	2320 01 121 2102	K	9140 00 273 2377	WV	K	0.1305			TRUCK TRAC M878A1	
T61035	2320 01 025 3733	K	9140 00 273 2377	WV	K	0.2051			TRK TRTR HET M911	
T61103	2320 01 028 4395	K	9140 00 273 2377	WV	K	0.2237			TRK TRTR M915	
T61103	2320 01 125 2640	K	9140 00 273 2377	WV	K	0.2486			M915A1 TRK TRTR	
T61171	2320 01 028 4397	K	9140 00 273 2377	WV	K	0.2237			TRK TRTR M920	
T61494	2320 01 107 7155	K	9140 00 273 2377	WV	K	0.0497			TRK UTILITY M998	
T61562	2320 01 107 7156	K	9140 00 273 2377	WV	K	0.0435			TRK CGO CARR M1038	
T63093	2320 01 097 0248	K	9140 00 273 2377	WV	K	0.2983			TRK WRK M984	
T87044	3825 00 153 6999	K	9130 00 160 1818	SV	H	8.00			SNW REMVL SELF-PRO	
T87243	2320 01 100 7672	K	9140 00 273 2377	WV	K	0.2983			TRK FUEL TACT M978	
T87568	3825 00 810 7074	K	9130 00 160 1818	MH	H	5.00			SNW REMVL FWRD5349	
T87602	3825 00 018 2121	K	9140 00 273 2377	MH	H	16.10			SNOW REMOVAL UNIT	
T88677	2320 01 097 0247	K	9140 00 273 2377	WV	K	0.2983			TRK TRACTOR M983	
T88745	2320 12 191 5422	K	9140 00 273 2377	WV	K	0.3107			TRK TRC M1001 W/W	
T91656	2320 01 028 4396	K	9140 00 273 2377	WV	K	0.2237			TRK TRTR M916	
T92242	2320 01 128 9551	K	9140 00 273 2377	WV	K	0.0435			TRK ARMICARR M1025	
T92310	2320 01 128 9552	K	9140 00 273 2377	WV	K	0.0435			TRK ARMTCARR M1026	
T94641	2320 12 191 5423	K	9140 00 273 2377	WV	K	0.3107			TRK TRAC M1002 W/W	
U11015	3740 00 772 0090	B	9130 00 160 1818	SG	H	.25			SPRAYER INSECT180G	
U11015	3740 00 916 6462	B	9130 00 160 1818	SG	H	.15			SPRAYER PEST 47500	
U11015	3740 00 993 4000	B	9130 00 160 1818	SG	H	.30			SPRAYER PESTCSR475	
U11426	3740 00 069 9002	B	9130 00 160 1818	SV	H	1.00			SPYR BESLER 1314E6	
U11426	3740 00 790 6188	B	9130 00 160 1818	SV	H	3.00			SPYR CRTS AUTO 400	
U11426	3740 00 930 9384	B	9130 00 160 1818	SV	H	3.00			SPYR CRTS DYN 4150	
U11426	3740 01 076 1341	B	9130 00 160 1818	SV	H	40.00			AEROSOL GEN XKA	
U58881	5420 00 491 6330	B	9140 00 273 2377	OV	H	15.00			SUPSTR TRANS T527	
U58881	5420 00 877 8679	B	9140 00 273 2377	OV	H	15.00			SUPSTR TRANS FMC	
U68809	6675 00 649 8273	B	9130 00 160 1818	SG	H	6.00			SURVEY CON SEC TRK	
U76734	3825 00 540 1437	K	9130 00 160 1818	SV	H	4.00			SWEeper SELF-PROP	
U76734	3825 00 598 0045	K	9130 00 160 1818	SV	H	4.00			SWEeper SELF-PROP	
U76871	3825 00 087 5019	K	9130 00 160 1818	CE	H	1.50			MUNI SUP MDL KGV 3	
U76871	3825 00 230 9690	K	9130 00 160 1818	CE	H	3.00			SWEeper LG 100-8-1	
U76871	3825 00 377 4327	K	9130 00 160 1818	CE	H	1.50			MEILE BLUMBERG 53M	
U76871	3825 00 555 0185	K	9130 00 160 1818	CE	H	1.50			GRACE MDL MS 105E	
U76871	3825 00 633 9962	K	9130 00 160 1818	CE	H	1.50			SPENCER MDL MS-1	
U76871	3825 00 641 6398	K	9130 00 160 1818	CE	H	1.50			LITTLE GANT ES 100	
U76871	3825 00 641 6401	K	9130 00 641 6401	CE	H	1.50			LITTLE GNT ES 100A	
U76871	3825 00 832 5269	K	9130 00 160 1818	CE	H	1.50			SWEeper MDL MP3867	
U76871	3825 00 859 7926	K	9130 00 160 1818	CE	H	1.50			IND MDL MP 38 W	
U76871	3825 01 022 7329	K	9130 00 160 1818	CE	H	2.50			SWEeper LG ES 100K	
W00426	1915 01 153 8801	B	9140 00 273 2377	AB	H	34.00			LOG SPT VESSEL	
V11001	3895 01 013 4328	K	9130 00 160 1818	CE	H	.50			TAMPERPISTHAMRVRII	

V11641	2230 00 294 2307	B	9130 00 160 1818	OV	H	1.00		JACK RAILWAY POWER
V12141	4930 00 070 1181	B	9130 00 160 1818	SG	H	.45		TK PUMP UNIT
V12141	4930 00 078 4938	B	9130 00 160 1818	SG	H	.45		TK PUMP UNIT BOW36
V12141	4930 00 078 4939	B	9130 00 160 1818	SG	H	.45		TK PUMP UNIT MD 29
V12141	4930 00 426 9960	B	9130 00 160 1818	SG	H	.45		TANK-PUMP UNIT
V12141	4930 00 542 2800	B	9130 00 160 1818	SG	H	.45		TK PUMP UNIT MD 11
V12141	4930 00 877 8678	B	9130 00 160 1818	SG	H	.45		TK PUMP UNIT HLDN2
V12141	4930 00 926 3581	B	9130 00 160 1818	SG	H	.45		TK PUMP UNIT ALTEC
V12141	4930 00 926 3692	B	9130 00 160 1818	SG	H	.45		TK PUMP UNIT ORRBL
V12141	4930 00 987 8576	B	9130 00 160 1818	SG	H	.45		TK PUMP UNIT ENG 2
V13101	2350 00 116 9765	S K	9140 00 273 2377	TV	H	2.00	26.53	M60A1 TNK105MMRISE
V13101	2350 00 148 6548	S K	9140 00 273 2377	TV	H	2.00	26.53	M60A3 TNK CBT105MM
V13101	2350 00 582 5595	S K	9140 00 273 2377	TV	H	2.00	26.53	M48A5 TNK CBT105MM
V13101	2350 00 678 5773	S K	9140 00 273 2377	TV	H	2.00	26.53	M60 TNK CMBT 105MM
V13101	2350 00 756 8497	S K	9140 00 273 2377	TV	H	2.00	26.53	M60A1 TNK CBT105MM
V13101	2350 01 058 9487	S K	9140 00 273 2377	TV	H	2.00	26.53	M60A1 TNK 105MMAOS
V13101	2350 01 059 1503	S K	9140 00 273 2377	TV	H	2.00	26.53	M60A1 TNK RISEPASS
V13101	2350 01 059 1504	S K	9140 00 273 2377	TV	H	2.00	26.53	M48A5 TNK LOW PROF
W48391	3431 01 090 1231	M	9140 00 273 2377	SG	H	2.00		WLD SHOP M6270100
W76268	2410 00 142 5283	K	9140 00 273 2377	CE	H	3.10		TRCTR D5
W76268	2410 00 230 2767	K	9140 00 273 2377	CE	H	3.10		TRCTR D5A ELE STAR
W76268	2410 00 828 6865	K	9140 00 273 2377	CE	H	3.10		TRCTR D5A GAS STAR
W76268	2410 00 900 8539	K	9140 00 273 2377	CE	H	3.20		CAT D6S
W76285	2410 00 024 4065	K	9140 00 273 2377	CE	H	7.00		TRACTOR CASE 1150W
W76302	2400 00 434 5309	K	9140 00 273 2377	CE	H	1.40		TRACTOR CASE M 480 CK
W76302	2400 00 900 8538	K	9140 00 273 2377	CE	H	1.40		TRCTR W/BKH AND LD
W76336	2410 00 935 0714	K	9140 00 273 2377	CE	H	6.00		TRCTR CASE MDLM450
W76473	2350 00 808 7100	S K	9140 00 273 2377	TV	H	1.42	12.35	TRCTRFTHIGH SPD M9
W76816	2410 00 078 6483	K	9140 00 273 2377	CE	H	6.00	9.26	TRCTR FT A/C HO-16
W76816	2410 00 177 7284	K	9140 00 273 2377	CE	H	6.00		TRCT FT CAT DF7 DV29
W76816	2410 00 185 9792	K	9140 00 273 2377	CE	H	6.00		TRCTR FT D7F W/ROP
W76816	2410 00 300 6664	K	9140 00 273 2377	CE	H	6.00		TRCTR FT D7F WNTNRZ
W76816	2410 00 782 1130	K	9140 00 273 2377	CE	H	6.00		TRCTR FT HYD CAT D7E
W76816	2410 00 901 1950	K	9140 00 273 2377	CE	H	6.00		TRCTR FT A/C HO-16M
W76816	2410 01 050 9628	K	9140 00 273 2377	CE	H	6.00		D7E TRCT FT W/BDZR
W77364	2410 00 542 2338	K	9140 00 273 2377	CE	H	9.50		TRCTR FT LS TD24-2
W77364	2410 00 542 4882	K	9140 00 273 2377	CE	H	6.10		TRCTR FT LS CAT D8
W77638	2410 00 542 2337	K	9140 00 273 2377	CE	H	6.00		TRCTR FT LS CAT D8
W77638	2410 00 542 4881	K	9140 00 273 2377	CE	H	6.00		TRCTR FT LSW/AD-8
W80104	2410 00 843 6374	K	9140 00 273 2377	CE	H	6.00		TRACTOR FULL TR
W80378	2410 00 926 0910	K	9140 00 273 2377	CE	H	3.10		TRCTR FL LS DED AIR
W80515	2410 00 542 4206	K	9140 00 273 2377	CE	H	3.10		CAT MDL D-6
W80515	2410 00 837 4224	K	9140 00 273 2377	CE	H	1.90		CAT MDL D-4
W80515	2410 00 983 8024	K	9140 00 273 2377	CE	H	1.90		AC MDL MD6M
W80652	3805 00 131 4620	K	9140 00 273 2377	CE	H	2.20		LDR JI CASE 450 MDL
W80652	3805 00 542 3402	K	9140 00 273 2377	CE	H	2.20		LDR INT TD6 ICY
W80652	3805 00 555 1756	K	9140 00 273 2377	CE	H	2.40		LDR CAT 933 ICY

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						IDL/AV	XCNTY	2NDRDS		
W80652	3805 00 621 1392	K	9140 00 273 2377	CE	H	2.20			LDR JI CASE 450 L ROPS	
W80789	2410 00 541 7655	K	9140 00 273 2377	CE	H	5.80			TRCTR FT IHC TD18	
W80789	2410 00 542 2498	K	9140 00 273 2377	CE	H	5.80			TRCT FT IHC TD20-2	
W83255	2410 00 541 7654	K	9140 00 273 2377	CE	H	5.10			TRCT FT IHC TD18-1	
W83255	2410 00 542 2499	K	9140 00 273 2377	CE	H	5.40			TRCT FT IHC TD20-2	
W83255	2410 00 828 3083	K	9140 00 273 2377	CE	H	5.40			TRCT FT IHC TD20-2	
W83529	2410 00 078 6484	K	9140 00 273 2377	CE	H	6.00			TRCT FT LC DD HD16	
W83529	2410 00 177 7283	K	9140 00 273 2377	CE	H	6.00			TRCT FT CAT DEF DV	
W83529	2410 00 185 9794	K	9140 00 273 2377	CE	H	6.00			TRCTR FT D7F W/ROP	
W83529	2410 00 300 6665	K	9140 00 273 2377	CE	H	6.00			TRCTR FT D7F WNTRZ	
W83529	2410 00 926 3697	K	9140 00 273 2377	CE	H	6.00			TRCTR LS DD CAT D7	
W83529	2410 01 050 9629	K	9140 00 273 2377	CE	H	6.00			D7EROPS TRCT W/BDZ	
E88493	2410 00 451 1003	K	9140 00 273 2377	CE	H	10.00			TRACTOR FULL TR	
W88509	2410 00 137 9194	K	9140 00 273 2377	CE	H	20.00			TRACTOR FULL TR	
W88525	2410 00 177 7091	K	9140 00 273 2377	CE	H	5.00			TRACTOR FULL TR	M
W88575	2410 00 574 7597	K	9140 00 273 2377	CE	H	6.00			TRCTR FT CAT D8K8A	
W88699	2410 00 574 7598	K	9140 00 273 2377	CE	H	6.00			TRCTR FT CAT D8K85	
W88758	2420 00 177 6861	K	9140 00 273 2377	CE	H	1.10			TRCTR AGRIC	
W88781	2420 00 177 6863	K	9140 00 273 2377	CE	H	1.30			TRCTR AGRIC	
W88786	2420 00 177 6865	K	9140 00 273 2377	CE	H	2.10			TRCTR AGRIC	
W88791	2420 00 177 6867	K	9140 00 273 2377	CE	H	3.20			TRCTR AGRIC	
W88796	2420 00 177 6869	K	9140 00 273 2377	CE	H	3.30			TRCTR AGRIC	
W88803	1740 00 134 1053	H	9130 00 160 1818	SV	H	6.00			TR WHLD ACFT TOW	
W88803	1740 00 865 9705	H	9130 00 160 1818	SV	H	6.00			TR WHLD ACFT690-1B	
W89557	3930 00 038 3166	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GAS J217	
W89557	3920 00 064 6563	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GAS MT40	
W89557	3930 00 181 3217	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL WHSE GPC	
W89557	3930 00 265 6864	K	9130 00 160 1818	CE	H	6.00			TRCTR WH GAS A4525	
W89557	3930 00 347 6173	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GASCTA40	
W89557	3930 00 678 9914	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GASCTA40	
W89557	3920 00 679 4823	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GAS 2TT4	
W89557	3920 00 724 3471	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GAS MT40	
W89557	3920 00 724 8146	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GAS 2TG4	
W89557	3930 00 926 1066	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GAS JG40	
W89557	3930 00 953 4890	K	9130 00 160 1818	CE	H	6.00			TRCTR WHL GAS 2TON	
W89604	2420 00 177 6862	K	9140 00 273 2377	CE	H	1.30			TRCTR IND 4199DB	
W89607	2420 00 177 6864	K	9140 00 273 2377	CE	H	2.10			TRCTR IND 5699DB	
W89610	2420 00 177 6866	K	9140 00 273 2377	CE	H	3.20			TRCTR IND 7299DB	
W89613	2420 00 177 6868	K	9140 00 273 2377	CE	H	3.30			TRCTR IND 7300DB	
W90447	2420 00 902 3084	K	9140 00 273 2377	CE	H	4.60			TRCT WHL IND DLS M	
W90790	2420 00 088 9384	K	9140 00 273 2377	CE	H	12.80			TRCTR WHL DSL 290M	
W90790	2420 00 104 1896	K	9140 00 273 2377	CE	H	12.90			TRCT WHL DSL 830MB	
W90790	2420 00 930 5999	K	9140 00 273 2377	CE	H	11.40			TRCTR CAT 830MB	

W90790	2420 01 006 4946	K	9140 00 273 2377	CE	H	15.20	TRCTR WHL830MDROPS
W90790	2420 01 028 4936	K	9140 00 273 2377	CE	H	11.40	TR CAT830MB ROPS
W90790	2420 01 059 0090	K	9140 00 273 2377	CE	H	15.20	290M TRCT WHLD
W90927	2420 00 415 6132	K	9140 00 273 2377	CE	H	4.60	TRCTR MDL 100 4x4
W90927	2420 00 792 6163	K	9140 00 273 2377	CE	H	4.60	TRCTR WHL IND DS L
W91064	2420 00 806 0031	K	9140 00 237 2377	CE	H	10.70	TRCT WHL DDLGT830M
W91074	2420 00 567 0135	K	9130 00 160 1818	WV	M	0.3107	TRCTR WHL INDJD410
W91201	2420 00 267 0136	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD 3000
W91201	2420 00 267 6887	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD 3725
W91201	2420 00 269 0802	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD 3000
W92160	2420 00 267 0115	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD 3725
W92160	2420 00 277 7495	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD 3725
W92160	2420 00 541 6689	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD GED
W92160	2420 00 542 3340	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD 3725
W92708	2420 00 580 7019	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD 5200
W92708	2420 00 856 2412	K	9130 00 160 1818	CE	H	4.00	TRACTOR WHLD 5200
X05621	5420 00 267 0034	B	9130 00 160 1818	SG	H	2.26	TRANWAY ST AER GD
X23277	5420 00 071 5321	B	9140 00 273 2377	WV	K	0.1554	TRANS PT BRIDG FLT
X38172	4210 01 006 1534	B	9140 00 273 2377	WV	K	0.1243	AERIAL LADDER 50FT
X30562	2310 00 125 5679	K	9130 00 160 1818	WV	K	0.0746	M893 TRK AMB 4x2
X38592	2310 00 579 9078	K	9130 00 160 1818	WV	K	0.0621	M886 TRK AMB 4x4
X38639	2310 00 177 9256	K	9130 00 160 1818	WV	K	0.0373	M718A1 TRK AMB
X38639	2310 00 782 6056	K	9130 00 160 1818	WV	K	0.0373	M718 TRK AMB 1/4 T
X38639	2310 00 835 8686	K	9130 00 160 1818	WV	K	0.0373	M170 TRK AMB 1/4 T
X38776	2310 00 542 4634	K	9130 00 160 1818	WV	K	0.0621	M43B1 TRK AMB 3/4 T
X38776	2310 00 835 8516	K	9130 00 160 1818	WV	K	0.0621	M43 TRK AMB 3/4 T
X38951	2310 00 921 6369	K	9130 00 160 1818	WV	K	0.0746	M725 TRK AMB 1-1/4
X38961	2310 00 832 9907	K	9140 00 273 2377	WV	K	0.0621	M792 TRK AMB 1-1/4
X39050	2320 00 277 3016	K	9130 00 160 1818	WV	K	0.0994	M45 TRK BLSTR CHAS
X39050	2320 00 542 4490	K	9130 00 160 1818	WV	K	0.0994	M44 TRK BLSTR CHAS
X39050	2320 00 937 0840	K	9130 00 160 1818	WV	K	0.0994	M751A1 TRK BLSTR
X39187	2320 00 050 8927	K	9140 00 273 2377	WV	K	0.1119	M815 TRK BOLSTER5T
X39187	2320 00 880 4615	K	9140 00 273 2377	WV	K	0.1119	M748A1 TRK BLSTR5T
X39426	4210 00 484 5729	B	9140 00 273 2377	WV	H	9.30	TRK FIRE PROL EQ
X39429	2320 00 579 8991	K	9130 00 160 1818	WV	K	0.0621	M890 TRK CGO1-1/4T
X39432	2320 00 579 8942	K	9130 00 160 1818	WV	K	0.0621	M890 TRK CGO1-1/4T
X39435	2320 00 579 9052	K	9130 00 160 1818	WV	K	0.0621	M892 TRK CGO1-1/4T
X39438	2320 00 579 9046	K	9130 00 160 1818	WV	K	0.0621	M891 TRK CGO1-1/4T
X39441	2320 00 579 8989	K	9130 00 160 1818	WV	K	0.0621	M885 TRK CGO1-1/4T
X39444	2320 00 579 8943	K	9130 00 160 1818	WV	K	0.0621	M881 TRK CGO1-1/4T
X39447	2320 00 579 8957	K	9130 00 160 1818	WV	K	0.0621	M882 TRK CGO1-1/4T
X39450	2320 00 579 8959	K	9130 00 160 1818	WV	K	0.0621	M883 TRK CGO1-1/4T
X39453	2320 00 579 8985	K	9130 00 160 1818	WV	K	0.0621	M884 TRK CGO1-1/4T
X39461	2320 01 090 7889	K	9130 00 160 1818	WV	K	0.0621	TRK CGO FCL1/4T 4x4
X39461	2320 01 090 7890	K	9130 00 160 1818	WV	K	0.0621	TRK CGO 1/4T 4x4
X39598	2320 01 090 7881	K	9130 00 160 1818	WV	K	0.0559	TRKCGO1/2T 4500G/W
X39598	2320 01 090 7882	K	9130 00 160 1818	WV	K	0.0621	TRKCGO1/2T 4800G/W

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTRY	2NDRDS		
X39598	2320 01 090 7883	K	9130 00 160 1818	WV	K	0.0684			TRKCGO3/4T 5800G/W	
X39598	2320 01 090 7885	K	9130 00 160 1818	WV	K	0.0621			TRKCGO1/2T 5800G/W	
X39598	2320 01 091 7880	K	9130 00 160 1818	WV	K	0.0621			TRK CARGO 1/4 TON	
X39735	2320 00 542 4636	K	9130 00 160 1818	WV	K	0.0621			M37B1 TRK CGO 3/4T	
X39735	2320 00 835 8322	K	9130 00 160 1818	WV	K	0.0621			M37 TRK CGO 3/4T	
X39872	2320 00 542 4632	K	9130 00 160 1818	WV	K	0.0621			M37B1 TRK CGO 3/4T	
X39872	2330 00 835 8323	K	9130 00 160 1818	WV	K	0.0621			M37TRK CGO 3/4T	
X39883	2320 00 921 6365	K	9130 00 160 1818	WV	K	0.0746			M715 TRK CGO 1-1/4	
X39893	2320 01 090 7891	K	9130 00 160 1818	WV	K	0.0746			TRKCGOFC IT 6000 1/2	
X39893	2320 01 090 7892	K	9130 00 160 1818	WV	K	0.0746			TRKCGO 3/4T 6600 G/W	
X39893	2320 01 090 7893	K	9130 00 160 1818	WV	K	0.0746			TRKCGO IT 8510 G/W	
X39893	2320 01 090 7894	K	9130 00 160 1818	WV	K	0.0746			TRKCGO IT 10000 G/W	
X39893	2320 01 090 7895	K	9130 00 160 1818	WV	K	0.0746			TRKCGO 3/4T 8000 G/W	
X39893	2320 01 090 7896	K	9130 00 160 1818	WV	K	0.0746			TRKCGO IT 10000 G/W	
X39906	2320 00 921 6366	K	9130 00 160 1818	WV	K	0.0746			M715 TRK CGO 1-1/4	
X39940	2320 00 873 5407	K	9140 00 273 2377	WV	K	0.0808			M561 TRK CGO 1-1/4	
X40009	2320 00 077 1616	K	9140 00 273 2377	WV	K	0.1305			M35A2 TRKCGO 2-1/2	M
X40009	2320 00 542 5633	K	9140 00 273 2377	WV	K	0.0870			M35A1 TRKCGO 2-1/2	M
X40009	2320 00 739 7545	K	9130 00 160 1818	WV	K	0.0932			M34 TRK CGO	
X40009	2320 00 834 4507	K	9130 00 160 1818	WV	K	0.1554			M2111TRK CGO 2-1/2	
X40009	2320 00 835 8351	K	9130 00 160 1818	WV	K	0.1305			M135 TRKCGO 2-1/2	
X40009	2320 00 835 8463	K	9130 00 160 1818	WV	K	0.1802			M35 TRK CGO 2-1/2T	
X40077	2320 00 926 0873	K	9140 00 273 2377	WV	K	0.1243			M35A2C TRK CGO P/S	M
X40146	2320 00 077 1617	K	9140 00 273 2377	WV	K	0.1305			M35A2 TRKCGO 2-1/2	M
X40146	2320 00 542 5634	K	9140 00 273 2377	WV	K	0.0932			M35A1 TRKCGO 2-1/2	M
X40146	2320 00 834 4508	K	9130 00 160 1818	WV	K	0.1056			M211 TRK CGO 2-1/2	
X40146	2320 00 835 8352	K	9130 00 160 1818	WV	K	0.0932			M135 TRK CGO	
X40146	2320 00 835 8464	K	9130 00 160 1818	WV	K	0.1305			M35 TRK CGO 2-1/2T	
X40146	2320 00 835 8536	K	9130 00 160 1818	WV	K	0.0932			M34 TRK CGO	
X40214	2320 00 926 0875	K	9140 00 273 2377	WV	K	0.1243			M35A2C TRKCGO D/S	M
X40283	2320 00 077 1618	K	9140 00 273 2377	WV	K	0.0932			M36A2 TRKCGO 2-1/2	M
X40283	2320 00 391 0569	K	9130 00 160 1818	WV	K	0.1305			M36 TRK CGO 2-1/2T	
X40420	2320 00 077 1619	K	9140 00 273 2377	WV	K	0.0932			M36A2 TRKCGO 2-1/2	
X40420	2320 00 647 0505	K	9130 00 160 1818	WV	K	0.1305			M36WW TRKCGO 2-1/2	M
X40557	2320 00 200 1368	K	9130 00 160 1818	WV	K	0.1305			M36W/ATT TRK CGO	
X40694	2320 00 200 1369	K	9130 00 160 1818	WV	K	0.1243			M36C WATTW TRK CGO	
X40794	2320 00 050 8913	K	9140 00 273 2377	WV	K	0.1243			M813A1 TRK CGO D/S	
X40794	2320 00 761 2854	K	9140 00 283 2377	WV	K	0.1554			M54A2C TRKCGO D/S	M
X40794	2320 00 880 4614	K	9140 00 273 2377	WV	K	0.1243			M54A1C TRKCGO D/S	
X40794	2320 01 050 2084	K	9140 00 283 2377	WV	K	0.1616			M923 TRK CGO 5T	
X40831	2320 00 050 8902	K	9140 00 273 2377	WV	K	0.1243			M813 TRK CGO 5T	
X40831	2320 00 055 9266	K	9140 00 273 2377	WV	K	0.1243			M54A2 TRK CGO 5T	M
X40831	2320 00 086 7481	K	9140 00 283 2377	WV	K	0.1243			M54A1 TRK CGO 5T	

X40831	2320 00 835 8348	K	9130 00 160 1818	WV	K	0.2921	M54 TRK CGO 5T
X40831	2320 01 047 8773	K	9140 00 273 2377	WV	K	0.1616	M924 TRK CGO 5T
X40931	2320 00 050 8905	K	9140 00 273 2377	WV	K	0.1243	M813A1 TRKCGO D/SW
X40931	2320 00 880 4612	K	9140 00 273 2377	WV	K	0.1243	M54A1C TRKCGO D/S
X40931	2320 00 926 0874	K	9140 00 273 2377	WV	K	0.1243	M54A2C TRKCGO D/S
X40931	2320 01 047 8769	K	9140 00 273 2377	WV	K	0.1616	M925 TRK CGO 5T
X40968	2320 00 050 8890	K	9140 00 273 2377	WV	K	0.1554	M813 TRKCGO LWB WW
X40968	2320 00 055 9265	K	9140 00 273 2377	WV	K	0.1243	M54A2 TRK CGO 5T
X40968	2320 00 086 7482	K	9140 00 273 2377	WV	K	0.1243	M54A1 TRKCGO LWBWW
X40968	2320 00 835 8335	K	9130 00 160 1818	WV	K	0.2237	M54 TRKCGO LWB W/W
X40968	2320 01 047 8772	K	9140 00 273 2377	WV	K	0.1616	M926 TRK CGO 5T
X41105	2320 00 050 8988	K	9140 00 273 2377	WV	K	0.1243	M814 TRKCGO 5TXLWB
X41105	2320 01 047 8771	K	9140 00 273 2377	WV	K	0.1616	M927 TRK CGO 5T
X41242	2320 00 050 8787	K	9140 00 273 2377	WV	K	0.1243	M814 TRKCGO 5TXLWB
X41242	2320 00 055 9259	K	9140 00 273 2377	WV	K	0.1429	M55A2 TRKCGO 5TWWN
X41242	2320 00 391 0570	K	9130 00 160 1818	WV	K	0.2237	M55 TRKCGO 5T W/WN
X41242	2320 00 880 4634	K	9140 00 273 2377	WV	K	0.1429	M55A1 TRK CGO
X41242	2320 01 047 8770	K	9140 00 273 2377	WV	K	0.1616	M926 TRK CGO 5T WW
X41310	2320 00 903 0883	K	9140 00 273 2377	WV	K	0.1802	M656 TRK CGO 5T8X8
X41327	2320 00 999 8418	K	9140 00 273 2377	WV	K	0.1678	M656WW TRKCGO 5T
X41615	2320 00 191 8310	K	9140 00 273 2377	WV	K	0.2734	M520 TRKCGO 8T 4x4
X41633	2320 01 010 4957	K	9140 00 273 2377	WV	K	0.3791	TRUCK CARGO M877
X41635	2320 01 010 4956	K	9140 00 273 2377	WV	K	0.3791	TRUCK CARGO 8 TON
X41635	2320 00 873 5422	K	9140 00 273 2377	WV	K	0.2423	M520 TRKCGO 8T WW
X42064	2320 01 090 7831	K	9130 00 160 1818	WV	K	0.0435	TRK CA 1/2T 4500GV
X42064	2320 01 090 7832	K	9130 00 160 1818	WV	K	0.0435	TRK CA 3/4T 6000GV
X42064	2320 01 090 7833	K	9130 00 160 1818	WV	K	0.0435	TRK CA 1T 7400 G/W
X42064	2320 01 090 7834	K	9130 00 160 1818	WV	K	0.0435	TRK CA 1/2T 8500GV
X42201	2320 01 090 7835	K	9130 00 160 1818	WV	K	0.0435	TRK CA 1/2T 6000GV
X42201	2320 01 090 7836	K	9130 00 160 1818	WV	K	0.0435	TRK CA 1/4T 8550GV
X42479	2320 01 695 6380	K	9140 00 273 2377	WV	K	0.1305	TRUCK CONT MAIN
X43228	2320 01 911 5071	K	9130 00 160 1818	WV	K	0.0684	M708 TRK DUMP 3/4T
X43228	2320 01 911 5078	K	9140 00 273 2377	WV	K	0.0684	M708A1 TRKDMP 3/4T
X43228	2320 01 926 7154	K	9130 00 160 1818	WV	K	0.0684	M708WWTRKDMP 3/4T
X43297	2320 00 077 1643	K	9140 00 273 2377	WV	K	0.1056	M342A2 TRK DUMP
X43297	2320 00 834 4509	K	9130 00 160 1818	WV	K	0.1305	M215 TRK DUMP
X43297	2320 00 835 8339	K	9130 00 160 1818	WV	K	0.1305	M471 TRK DUMP
X43297	2320 00 835 8595	K	9130 00 160 1818	WV	K	0.1305	M59 TRK DUMP
X43434	2320 00 077 1644	K	9130 00 273 2377	WV	K	0.1056	M342A2 TRK DUMP
X43434	2320 00 834 4510	K	9130 00 160 1818	WV	K	0.1305	M215 TRK DUMP W/WN
X43434	2320 00 835 8340	K	9130 00 160 1818	WV	K	0.1305	M47 TRK DUMP
X43434	2320 00 835 8597	K	9130 00 160 1818	WV	K	0.1305	M59 TRK DUMP W/W
X43565	2320 01 091 1681	K	9140 00 273 2377	WV	K	0.1243	TRK DUMP 3.5 CU YD
X43571	2320 01 090 7815	K	9140 00 273 2377	WV	K	0.1305	TRK DUMP 19M GW
X43589	2320 01 090 7816	K	9140 00 273 2377	WV	K	0.1554	TRK D 8T 24M GW 4
X43589	2320 01 090 7817	K	9140 00 273 2377	WV	K	0.1554	TRK D 8T 2800 GW
X43589	2320 01 090 7819	K	9140 00 273 2377	WV	K	0.1554	TRK D 8T 24M GW 6

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						IDL/AV	XCNTY	2NDRDS		
X43708	2320 00 045 7131	K	9140 00 273 2377	WW	K	0.1243			M51A1 TRK DUMP	
X43708	2320 00 050 8970	K	1940 00 273 2377	WW	K	0.1243			M817 TRK DUMP	
X43708	2320 00 055 9262	K	9140 00 273 2377	WW	K	0.1429			M51A2 TRK DUMP	M
X43708	2320 00 835 8336	K	9130 00 160 1818	WW	K	0.1429			M51 TRK DUMP	
X43708	2320 01 047 8756	K	9140 00 273 2377	WW	K	0.1616			M929 TRK DMP 5T	
X43845	2320 00 045 7132	K	9140 00 273 2377	WW	K	0.1243			M51A1 TRK DUMP W/W	
X43845	2320 00 051 0589	K	9140 00 273 2377	WW	K	0.1243			M817 TRK DUMP W/W	
X43845	2320 00 055 9263	K	9140 00 273 2377	WW	K	0.137			M51A2 TRK DUMP W/W	M
X43845	2320 00 835 8337	K	9130 00 160 1818	WW	K	0.2237			M51 TRK DUMP W/W	
X43845	2330 01 047 8755	K	9140 00 273 2377	WW	K	0.1616			M930 TRK DUMP 5T	
X44393	3805 00 368 2845	K	9140 00 273 2377	WW	K	0.3977			TRK DUMP15TMDL2-FD	
X44393	3805 00 368 2847	K	9140 00 273 2377	WW	K	0.3977			TRKDUMP15TMDL5-FD	
X44393	3805 00 368 2848	K	9140 00 273 2377	WW	K	0.3977			TRKDUMP15T127-FDG	
X44393	3805 00 368 2850	K	9140 00 273 2377	WW	K	0.3977			TRKDUMP15T MDL-LR	
X44403	3805 00 192 7249	K	9140 00 273 2377	WW	K	0.4661			TRK DUMP 2QT F5070	
X44403	3805 01 028 4389	K	9140 00 273 2377	WW	K	0.4661			TRK DUMP	
X44701	4210 00 577 7656	B	9140 00 273 2377	WW	H	8.00			TRK FIRE FIGHTING	
X44701	4210 01 025 4976	B	9140 00 273 2377	WW	H	8.00			1000 GPM PUMPER	
X44718	4210 00 965 1254	B	9140 00 273 2377	WW	H	8.00			AERIAL LADDER 85FT	
X44733	4210 01 026 2567	B	9130 00 160 1818	WW	M	10.00			MIN PUMPER	
X44735	4210 00 236 6260	B	9140 00 273 2377	SV	H	8.00			TRK FF750MLT11407	
X44804	4210 00 542 2113	B	9130 00 160 1818	WW	H	10.50			TRK FF 500 GPM HC26	
X44804	4210 00 542 2195	B	9130 00 160 1818	WW	H	10.50			TRK FF 500 GPM 530RA	
X44804	4210 00 542 2196	B	9130 00 160 1818	WW	H	10.50			TRK FF 500 GPM 530HAW	
X44804	4210 00 620 0106	B	9130 00 160 1818	WW	H	10.50			TRK FF 500 GPM WNTZ	
X44941	4210 00 225 9127	B	9140 00 273 2377	SV	H	8.00			TRKFF500GPM M44WLF	M
X44941	4210 00 449 0431	B	9140 00 273 2377	SV	H	8.00			TRKFAM A FILM454A2	M
X44941	4210 00 928 3515	B	9140 00 273 2377	SV	H	8.00			TRK FF WLF M45A2	M
X45095	4210 00 184 6415	B	9140 00 273 2377	WW	H	10.50			A/S32-P4	
X45095	4210 00 897 6190	B	9140 00 273 2377	WW	H	12.50			TRK FIRE FIGHTING	
X45187	2320 01 463 4584	K	9140 00 273 2377	WW	K	0.1305			TRUCK REFUSE 51000	
X45317	1450 00 878 9024	K	9130 00 160 1818	WW	K	0.0808			TRUCK GM 10296963	
X45549	1450 00 176 2712	K	9130 00 160 1818	WW	K	0.0808			TRUCK GM EQUIP	
X48792	2320 01 273 4426	K	9130 00 160 1818	WW	K	0.0621			TRUCK HOPPER COAL	
X48799	2320 00 463 4561	K	9140 00 273 2377	WW	K	0.1305			TRUCK HOPPER COAL	
X48904	3930 00 503 0340	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK MDL H5208	
X48914	3930 00 327 1575	K	9140 00 273 2377	MH	H	6.00			TRK LF MLT6-2	
X48914	3930 00 419 5744	K	9140 00 273 2377	MH	H	5.00			TRK LF DD MOL T6	
X48914	3930 00 903 0900	K	9140 00 273 2377	MH	H	5.00			TRK LF DD MDL	
X48914	3930 00 926 3835	K	9140 00 273 2377	MH	H	5.00			TRK LF DD MDL-6W	
X48914	3930 00 937 0220	K	9140 00 273 2377	MH	H	5.00			TRK LF MDL MLT6CH	
X48914	3930 01 053 4823	K	9140 00 273 2377	MH	H	5.00			TRK FL MLT 6CHROPS	
X48914	3930 01 054 3830	K	9140 00 273 2377	MH	H	5.00			TRK FL MLD ARTFT 6	

X48914	3930 01 054 3831	K	9140 00 273 2377	MH	H	5.00	TRK FL MLT 6ROPS
X49051	3930 00 465 5869	K	9140 00 273 2377	MH	H	6.50	TRK LF PET B BTL10
X49051	3930 00 903 0899	K	1940 00 273 2377	MH	H	6.50	TRK LF DD A-3520
X51106	3930 00 271 1449	K	9130 00 160 1818	MH	H	1.50	TRK FL 2000LBRS-53
X51106	3930 00 271 1833	K	9130 00 160 1818	MH	H	1.50	TRK 2000LB FB20-24
X51106	3930 00 271 1834	K	9130 00 160 1818	MH	H	1.50	TRK FL FB-20-24-RS
X51106	3930 00 273 8204	K	9130 00 160 1818	MH	H	1.50	TRK 2000LB CE20240
X51106	3930 00 273 8223	K	9130 00 160 1818	MH	H	1.50	TRK FL KG-51T20HRS
X51106	3930 00 273 8226	K	9130 00 160 1818	MH	H	1.50	TRK FL KG-51T-20H
X51106	3930 00 315 9699	K	9130 00 160 1818	MH	H	1.50	TRK FL CLARK C500-
X51106	3930 00 436 1413	K	9130 00 160 1818	MH	H	1.50	TRK FL C20B1756421
X51106	3930 00 781 3858	K	9130 00 160 1818	MH	H	1.00	TRKFLC20B163203BRS
X51106	3930 00 958 3683	K	9130 00 160 1818	MH	H	1.00	TRK FL FT2024PS127
X51243	3930 00 436 1411	K	9130 00 160 1818	MH	H	1.00	TRK FL C20B1756240
X51243	3930 00 531 6031	K	9130 00 160 1818	MH	H	1.00	TRK 2000LB KG51T20
X51243	3930 00 781 3857	K	9130 00 160 1818	MH	H	1.00	TRK FLGAS CLARKMOL
X51243	3930 00 958 3682	K	9130 00 160 1818	MH	H	1.00	TRK FLT20-24PS100
X51311	3930 00 926 3807	K	9130 00 160 1818	MH	H	1.00	TRK FL502PG4024100
X51380	3930 00 064 5868	K	9130 00 160 1818	MH	H	1.00	TRK FL 144LHMV40MB
X51380	3930 00 073 8676	K	9130 00 160 1818	MH	H	1.00	TRK FL 144LMFJF040
X51380	3930 00 073 9222	K	9130 00 160 1818	MH	H	1.00	TRK FL502PG4C24144
X51380	3930 00 151 4428	K	9130 00 160 1818	MH	H	1.00	TRK FLFJF040W/FS162
X51380	3930 00 257 4868	K	9130 00 160 1818	MH	H	1.00	TRK FL 144 LHMDL40
X51380	3930 00 678 9913	K	9130 00 160 1818	MH	H	.75	TRK FL144G5P4-4024
X51380	3930 00 724 3568	K	9130 00 160 1818	MH	H	1.00	TRK FL 144 LHMON02
X51380	3930 00 724 3570	K	9130 00 160 1818	MH	H	1.00	TRK FL 144 LHMON02
X51380	3930 00 935 7963	K	9130 00 160 1818	MH	H	1.50	TRK FL FJF-040-M02
X51517	3930 00 165 4102	K	9130 00 160 1818	MH	H	1.30	TRKFLACF40-24-PS
X51517	3930 00 224 8685	K	9130 00 160 1818	MH	H	1.30	TRKFL CLARKCL1081N
X51517	3930 00 266 8959	K	9130 00 160 1818	MH	H	1.30	TRKFL CLARK CL4024
X51517	3930 00 542 2175	K	9130 00 160 1818	MH	H	1.30	TRKFL CLARK CL4024
X51517	3930 00 590 7814	K	9130 00 160 1818	MH	H	1.30	TRK LF ACC 40PS100
X51517	3930 00 678 9917	K	9130 00 160 1818	MH	H	1.30	TRKLF TOWMOTOR 461
X51517	3930 00 781 3856	K	9130 00 160 1818	MH	H	1.30	TRKLFMTR462EG4024
X51517	3930 00 935 7866	K	9130 00 160 1818	MH	H	1.30	TRKLF SA0CP-100
X51517	3930 00 954 9311	K	9130 00 160 1818	MH	H	1.30	TRKLFCLCA0B1615158
X51517	3930 01 039 8291	K	9130 00 160 1818	MH	H	1.25	TRK LF ACC 40PS144
X51517	3930 01 075 4937	K	9130 00 160 1818	MH	H	1.25	TRK LF ACC 45PS144
X51585	3930 00 419 5738	K	9130 00 160 1818	MH	H	1.30	TRKLF 4000LB 144LH
X51585	3930 01 040 4594	K	9130 00 160 1818	MH	H	1.30	TRKLF 4000LB144LH
X51585	3930 01 085 3767	K	9130 00 160 1818	MH	H	1.30	TRUCK LIFT FORK 4000 LBS
X51654	3930 00 017 9079	K	9130 00 160 1818	MH	H	1.50	TRK LF 4000LB180LH
X51654	3930 00 064 6564	K	9130 00 160 1818	MH	H	1.00	TRK LF4000LBM40MRS
X51654	3930 00 214 1025	K	9130 00 160 1818	MH	H	1.50	SC S-4024-RS-10000
X51654	3930 00 214 1026	K	9130 00 160 1818	MH	H	1.50	VAL-TOWKG-51T-40RS
X51654	3930 00 257 4869	K	9130 00 160 1818	MH	H	1.50	TRK LF S-4024-8000
X51654	3930 00 273 8224	K	9130 00 160 1818	MH	H	1.50	TRK LF 4000LBLT-48

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						IDL/AV	XCNTY	2ND RDS		
X51654	3930 00 459 5948	K	9130 00 160 1818	MH	H	1.50			TRUCK LF F40-24-PS	
X51654	3930 00 542 2176	K	9130 00 160 1818	MH	H	1.50			TRK LF4000LBSL4024	
X51654	3930 00 556 4955	K	9130 00 160 1818	MH	H	1.50			TRK LF AC440FS180	
X51654	3930 00 678 9916	K	9130 00 160 1818	MH	H	1.50			TRK LF 461-RS SRT	
X51654	3930 00 752 9464	K	9130 00 160 1818	MH	H	1.50			TRK LF 4000 LB 461	
X51654	3930 00 781 3855	K	9130 00 160 1818	MH	H	1.50			TRK LF462SG4024144	
X51654	3930 00 935 7865	K	9130 00 160 1818	MH	H	1.50			TRK LF 4000LBS40PC	
X51654	3930 00 937 5638	K	9130 00 160 1818	MH	H	1.50			CLARK 4024 1481NLH	
X51654	3930 00 954 1303	K	9130 00 160 1818	MH	H	1.50			TRKLFCA0B1615159RS	
X51654	3930 01 039 8292	K	9130 00 160 1818	MH	H	1.25			TRK LF ACC 40PS180	
X51791	3930 00 025 1015	K	9130 00 160 1818	MH	H	1.50			TRK LFF6000LBLT60RS	
X51791	3930 00 064 5869	K	9130 00 160 1818	MH	H	1.50			TRK LF MY-60-MCNR5	
X51791	3930 00 064 5870	K	9130 00 160 1818	MH	H	1.50			TRK LF MDLM460MCR5	
X51791	3930 00 235 4674	K	9130 00 160 1818	MH	H	1.50			TRKLF FJF06CMDL210	
X51791	3930 00 266 8957	K	9130 00 160 1818	MH	H	1.50			TRKLF6000LBMDDL4024	
X51791	3930 00 266 8958	K	9130 00 160 1818	MH	H	1.50			TRK LF MDL6024RS50	
X51791	3930 00 266 8963	K	9130 00 160 1818	MH	H	1.50			TRK LF 6000LB 60RS	
X51791	3930 00 271 1892	K	9130 00 160 1818	MH	H	1.50			TRKLF 6000LBSF6024	
X51791	3930 00 272 9289	K	9130 00 160 1818	MH	H	1.50			TRK LF 6000LB LT60	
X51791	3930 00 272 9290	K	9130 00 160 1818	MH	H	1.50			TRKLF6000LBLT60-RS	
X51791	3930 00 273 8207	K	9130 00 160 1818	MH	H	1.50			CLARK MDL 6024RS52	
X51791	3930 00 724 3569	K	9130 00 160 1818	MH	H	1.50			TRK LF 6000LBMON02	
X51791	3930 00 738 5938	K	9130 00 160 1818	MH	H	1.50			TRK LF6000LBFJF060	
X51791	3930 00 897 4633	K	9130 00 160 1818	MH	H	1.50			TRKLFGASKGPA51AT60	
X51791	3930 00 935 7979	K	9130 00 160 1818	MH	H	1.50			TRK LF ACFP-6-24PS	
X51791	3930 00 958 3684	K	9130 00 160 1818	MH	H	1.50			TRKLF GASFP60-24PS	
X51791	3930 01 052 5050	K	9130 00 160 1818	MH	H	1.50			TRK LF ACC 60PS180	
X51928	3930 00 679 4458	K	9130 00 160 1818	MH	H	1.50			TRKLF GASMDLRJF060	
X52065	3930 00 223 0624	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52065	3930 00 935 7856	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52065	3930 00 937 5637	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52202	3930 00 292 1100	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52202	3930 00 554 2318	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52202	3930 00 935 7855	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52339	3930 00 292 1098	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52339	3930 00 554 4592	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52339	3930 00 935 7857	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52407	3930 00 489 0263	K	9130 00 160 1818	MH	H	1.30			TRUCK, LIFT FORK	
X52476	3930 00 554 2700	K	9130 00 160 1818	MH	H	1.50			TRK LF GAS MR100RS	
X52476	3930 00 678 9056	K	9130 00 160 1818	MH	H	1.50			TRK LF MR 100SIZE2	
X52476	3930 00 799 9956	K	9130 00 160 1818	MH	H	1.50			TRK LF GAS HR-100	
X52476	3930 00 973 0659	K	9130 00 160 1818	MH	H	1.50			TRK LF GAS 390012	
X52613	3930 00 679 4457	K	9130 00 160 1818	MH	H	3.00			TRUCK, LIFT FORK	

X52613	3930 01 054 3832	K	9130 00 160 1818	MH	H	3.00	TRUCK, LIFT FORK
X52750	3930 00 038 4410	K	9130 00 160 1818	MH	H	.70	TRK LF1500LBRT100
X52750	3930 00 038 4411	K	9130 00 160 1818	MH	H	2.00	TRK LF GAS RT-100-RS
X52750	3930 00 038 4412	K	9130 00 160 1818	MH	H	2.00	TRK LFYL-158-53-RS
X52750	3930 00 151 4434	K	9130 00 160 1818	MH	H	2.00	TRK LF GAS SHYSH130F
X52750	3930 00 271 1893	K	9130 00 160 1818	MH	H	2.00	TRK LF GAS RT-150RS
X52750	3930 00 271 1894	K	9130 00 160 1818	MH	H	2.00	TRK LF GAS RT-150
X52750	3930 00 273 8203	K	9130 00 160 1818	MH	H	2.00	TRK LF15000LB-150
X52750	3930 00 351 9946	K	9130 00 160 1818	MH	H	2.00	TRK LF GAS FL-100
X52750	3930 00 514 3477	K	9130 00 160 1818	MH	H	2.00	TRK LF15000LBPH130
X52750	3930 00 621 7413	K	9130 00 160 1818	MH	H	2.00	TRK LF15000LB CY150
X52750	3930 00 897 4632	K	9130 00 160 1818	MH	H	2.00	TRK LF15000LB M150C
X52784	3930 00 740 3190	K	9130 00 160 1818	MH	H	4.00	TRUCK, LIFT FORK
X52810	3930 00 832 7043	K	9130 00 160 1818	MH	H	.70	TRK LF FL 4000LB
X53366	2320 00 437 1137	K	9140 00 273 2377	WV	K	0.1305	TRUCK MAINT LINE
X53371	2320 00 463 4580	K	9140 00 273 2377	WV	K	0.1305	TRUCK MAINT LINE
X53376	2320 00 463 4582	K	9140 00 273 2377	WV	K	0.1305	TRUCK MAINT LINE
X53400	2320 00 437 1140	K	9140 00 273 2377	WV	K	0.1305	TRUCK MAINT LINE
X53402	2320 00 224 8859	K	9140 00 273 2377	WV	K	0.1305	TRUCK MAINT LINE
X53406	2320 00 117 3418	K	9140 00 273 2377	WV	K	0.1305	TRUCK MAINT LINE
X53572	2320 00 287 1991	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 392 8190	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 542 4150	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 761 2855	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 782 6886	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 782 6889	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 892 2154	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 962 3703	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 926 3704	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 926 3707	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 926 7000	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 926 7001	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53572	2320 00 926 7032	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT TELEPH
X53709	2320 00 392 3703	K	9130 00 160 1818	WV	K	0.0621	M201 TRK MNT TEL
X53709	2320 00 630 6801	K	9130 00 160 1818	WV	K	0.0621	M201B1 TRK MNT TEL
X53775	2320 00 921 6833	K	9130 00 160 1818	WV	K	0.0746	M726 TRK MNT TEL
X53790	2320 00 235 4815	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT
X53846	2320 00 498 8377	K	9130 00 160 1818	WV	K	0.1305	TRK MNT TEL V17AMT
X53848	2320 00 410 7313	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT UTILIT
X53851	2320 00 411 3970	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT UTILIT
X53856	2320 00 277 1396	K	9130 00 160 1818	WV	K	0.0621	TRUCK MAINT UTILIT
X53983	2320 00 498 8378	K	9130 00 160 1818	WV	K	0.1305	TRK MNT V18A/MTQ W
X53983	2320 00 937 5980	K	9140 00 273 2377	WV	K	0.1305	M764 TRK MNT BORER
X53983	2320 00 973 4577	K	9130 00 160 1818	WV	K	0.1305	TRK MNT V18B/MTQ W
X54428	2320 00 279 0683	K	9130 00 160 1818	WV	K	0.0621	TRUCK MATL HANDLIN
X54433	2320 00 275 7932	K	9130 00 160 1818	WV	K	0.0621	TRUCK MATL HANDLIN
X54445	2320 00 460 2564	K	9130 00 160 1818	WV	K	0.0621	TRUCK MATL HANDLIN

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						IDL/AV	XCNTRY	2NDRDS		
X54448	2320 00 458 9765	K	9130 00 160 1818	WV	K	0.0621			TRUCK MATL HANDLIN	
X54805	2320 01 090 7837	K	9130 00 160 1818	WV	K	0.0621			TRK PNL 3/4T 4500	M
X54805	2320 01 090 7838	K	9130 00 160 1818	WV	K	0.0435			TRK PNL 3/4T 5200	
X54805	2320 01 090 7840	K	9130 00 160 1818	WV	K	0.0435			TRK PHL 3/4T	
X55216	2320 00 904 3277	K	9140 00 273 2377	WV	K	0.0932			M756A2 TRK MNT PPL	M
X55627	2320 00 049 4804	K	9130 00 160 1818	WV	K	0.0559			M274 TRK PLTFM UTL	
X55627	2320 00 064 6373	K	9130 00 160 1818	WV	K	0.0435			274A1 TRK PLT UTL	
X55627	2320 00 074 1167	K	9130 00 160 1818	WV	K	0.0435			M274A2 TRK PLT UTL	
X55627	2320 00 782 5792	K	9130 00 160 1818	WV	K	0.0435			M274A3 TRK PLT UTL	M
X55627	2320 00 782 5793	K	9130 00 160 1818	WV	K	0.0435			M274A4 TRK PLT UTL	
X55627	2320 00 930 1976	K	9130 00 160 1818	WV	K	0.0435			M274A5 TRK PLT UTL	
X55820	2320 00 489 8323	K	9130 00 160 1818	WV	K	0.0621			TRUCK REFUSE COLL	
X55832	2320 00 174 1610	K	9130 00 160 1818	WV	K	0.0621			TRUCK REFUSE COLL	
X55837	2320 00 411 5798	K	9130 00 160 1818	WV	K	0.0621			TRUCK REFUSE COLL	
X55839	2320 00 489 8324	K	9140 00 273 2377	WV	K	0.1305			TRUCK REFUSE COLL	
X55842	2320 00 963 6229	K	9140 00 273 2377	WV	K	0.1305			TRUCK REFUSE COLL	
X55847	2320 00 963 6270	K	9140 00 273 2377	WV	K	0.1305			TRUCK REFUSE COLL	
X56449	2320 01 090 7905	K	9140 00 273 2377	WV	K	0.1119			TKSTK 3-1/2T14MGVM	
X56449	2320 01 090 7906	K	9140 00 273 2377	WV	K	0.1243			TKSTK 4-1/2T16MGVM	
X56586	2320 00 050 9015	K	9140 00 273 2377	WV	K	0.1554			M821 TRK STK BR TR	
X56586	2320 00 200 1682	K	9130 00 160 1818	WV	K	0.1554			TRK STK BRDGE TRSP	
X56586	2320 00 880 4652	K	9140 00 273 2377	WV	K	0.1119			M328A1 TRK STKBRTR	
X56997	3930 00 179 1147	K	9130 00 160 1818	WV	K	0.0684			TRUCK STRADDLE	
X57271	2320 00 077 1631	K	9140 00 273 2377	WV	K	0.0932			M49A2C TRK TNK FS	M
X57271	2320 00 141 8235	K	9130 00 160 1818	WV	K	0.1305			M49C TRK TNK FS	
X57271	2320 00 440 3349	K	9130 00 160 1818	WV	K	0.0932			M49A1C TRK TNK FS	
X57408	2320 00 077 1632	K	9140 00 273 2377	WV	K	0.0932			M49A2C TRK TNK FS	M
X57408	2320 00 141 8237	K	9130 00 160 1818	WV	K	0.1305			M49C TRK TNK FS	
X57408	2320 00 440 3346	K	9130 00 160 1818	WV	K	0.0932			M49A1C TRK TNK FS	
X58078	2320 00 445 7250	K	9130 00 160 1818	WV	K	0.0621			M559 TRK TNK FS	
X58093	2320 00 873 5420	K	9130 00 160 1818	WV	K	0.0621			M559 TRK TNK FS WW	
X58367	2320 00 077 1633	K	9140 00 273 2377	WV	K	0.1243			M50A2 TRK TNK WTR	M
X58367	2320 00 440 8307	K	9140 00 273 2377	WV	K	0.1243			M50A1 TRK TNK WTR	
X58367	2320 00 835 8344	K	9140 00 273 2377	WV	K	0.1243			M50 TRK TNK WTR	
X58367	2320 00 937 4036	K	9140 00 273 2377	WV	K	0.1243			M50A3 TRK TNK WTR	
X58504	2320 00 077 1634	K	9140 00 273 2377	WV	K	0.1243			M50A2TRK TK WTR WW	M
X58504	2320 00 174 1601	K	9140 00 273 2377	WV	K	0.1243			M50 TRK TNK WTR WW	
X58504	2320 00 440 8305	K	9140 00 273 2377	WV	K	0.1243			M50A1TRK TK WTR WW	
X58504	2320 00 937 5264	K	9140 00 273 2377	WV	K	0.1243			M50A3TRK TK WTR WW	
X59052	2320 00 077 1640	K	9140 00 273 2377	WV	K	0.1305			M275A2 TRK TRAC	M
X59052	2320 00 446 2479	K	9140 00 273 2377	WV	K	0.1305			M275A1 TRK TRAC	M
X59052	2320 00 835 8345	K	9130 00 160 1818	WV	K	0.1305			M48 TRK TRAC	
X59052	2320 00 835 8609	K	9130 00 160 1818	WV	K	0.1305			M275 TRK TRAC	

X59189	2320 00 077 1641	K	9140 00 273 2377	WV	K	0.1305	M275A2 TRK TRAC WW	M
X59189	2320 00 835 8346	K	9130 00 160 1818	WV	K	0.1305	M48 TRK TRAC W/W	
X59189	2320 00 835 8611	K	9130 00 160 1818	WV	K	0.1305	M275 TRK TRAC W/W	
X59326	2320 00 050 8984	K	9140 00 273 2377	WV	K	0.1491	M818 TRK TRAC	
X59326	2320 00 055 9260	K	9140 00 273 2377	WV	K	0.1429	M52A2 TRK TRAC	M
X59326	2320 00 086 7479	K	9140 00 273 2377	WV	K	0.1184	M52A1 TRK TRAC	
X59326	2320 00 835 8326	K	9130 00 160 1818	WV	K	0.2237	M52 TRK TRAC	
X59326	2320 01 047 8753	K	9140 00 273 2377	WV	K	0.1554	M931 TRK TRACT 5T	
X59463	2320 00 050 8978	K	9140 00 273 2377	WV	K	0.1491	M818 TRK TRAC W/W	
X59463	2320 00 855 9261	K	9140 00 273 2377	WV	K	0.1429	M52A2 TRK TRAC W/W	M
X59463	2320 00 086 7480	K	9140 00 273 2377	WV	K	0.1184	M52A1 TRK TRAC W/W	
X59463	2320 00 835 8329	K	9140 00 273 2377	WV	K	0.1367	M52 TRK TRAC W/W	
X59463	2320 01 047 8752	K	9140 00 273 2377	WV	K	0.1491	M932 TRK TRACT 5T	
X59505	2320 00 937 1846	K	9140 00 273 2377	WV	K	0.1119	M757 TRK TRAC W/W	
X59600	2320 00 395 1875	K	9130 00 160 1818	WV	K	0.3418	M123 TRK TRAC W/W	
X59737	2320 00 542 2509	K	9130 00 160 1818	WV	K	0.3418	M123D TRK TRAC W/W	
X59874	2320 00 226 6081	K	9140 00 273 2377	WV	K	0.3107	M123A1C TRK TRAC	
X59874	2320 00 294 9552	K	9130 00 160 1818	WV	K	0.3418	M123C TRK TRAC	
X59874	2320 00 879 6177	K	9140 00 273 2377	WV	K	0.3107	TRK TRACXM12352	
X60185	2320 01 090 7781	K	9140 00 273 2377	WV	K	0.0808	TK TCTR 26K GTW	M
X60185	2320 01 090 7782	K	9140 00 273 2377	WV	K	0.0808	TK TCTR 32K GTW	M
X60422	2320 01 090 7784	K	9140 00 273 2377	WV	K	0.1491	TRK TCTR 34500 GVV	
X60422	2320 01 090 7785	K	9140 00 273 2377	WV	K	0.1491	TRK TCTR 39500 GVV	
X60440	2320 01 090 7786	K	9140 00 273 2377	WV	K	0.1491	TRK TCTR 44500 GVV	
X60440	2320 01 090 7787	K	9140 00 273 2377	WV	K	0.1491	TRK TCTR 51000 GVV	
X60440	2320 01 090 7788	K	9140 00 273 2377	WV	K	0.1491	TRK TCTR 64000 GVV	
X60696	2320 00 050 9004	K	9140 00 273 2377	WV	K	0.1243	M819 TRK TRAC W/W	
X60696	2320 00 073 8251	K	9140 00 273 2377	WV	K	0.1429	M246A2 TRK TRAC WW	
X60696	2320 00 695 9375	K	9140 00 273 2377	WV	K	0.1243	M246A1 TRK TRAC WW	
X60696	2320 00 835 8639	K	9130 00 160 1818	WV	K	0.2237	M246 TRK TRAC W/W	
X60696	2320 00 047 8768	K	9130 00 273 2377	WV	K	0.1491	TRK TRAC M933 51	
X60833	2320 00 177 9258	K	9130 00 160 1818	WV	K	0.0435	TRK UTIL M151A2	
X60833	2320 00 542 4783	K	9130 00 160 1818	WV	K	0.0435	TRK UTIL M151	
X60833	2320 00 763 1092	K	9130 00 160 1818	WV	K	0.0435	TRK UTIL M151A1	
X60833	2320 00 835 8318	K	9130 00 160 1818	WV	K	0.0373	M38 TRK UTIL	
X60833	2320 00 835 8319	K	9130 00 160 1818	WV	K	0.0373	TK UTIL 1/4TM38A1	
X60967	2320 00 089 7264	K	9130 00 160 1818	WV	K	1.3795	M746 TRK TRAC HET	
X61244	2320 00 141 8841	K	9130 00 160 1818	WV	K	0.0311	M38A1C TRK UTIL	
X61244	2320 00 177 9257	K	9130 00 160 1818	WV	K	0.0373	M825 TRK UTIL	
X61244	2320 00 763 1091	K	9130 00 160 1818	WV	K	0.0435	TRK UTIL M151A1C	
X61381	2320 00 445 0867	K	9130 00 160 1818	WV	K	0.0373	M38AID TRK UTIL	
X61518	2320 01 090 7826	K	9130 00 160 1818	WV	K	0.0373	TRK UTIL 4X2	
X61518	2320 01 090 7827	K	9130 00 160 1818	WV	K	0.0373	TRK UTIL WAGON	
X61655	2320 01 090 7828	K	9130 00 160 1818	WV	K	0.0373	TRK UTIL 1/2T 4X4	
X61792	2320 01 090 7771	K	9140 00 273 2377	WV	K	0.1554	TRK VAN CGO 16000G	
X61792	2320 01 090 7772	K	9140 00 273 2377	WV	K	0.1554	TRK VAN CGO 19000G	
X61929	2320 00 077 1642	K	9140 00 273 2377	WV	K	0.0932	M292A2 TRK VAN EXP	

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSM CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						IDL/AV	XCNTRY	2ND RDS		
X61929	2320 00 325 6574	K	9130 00 160 1818	WV	K	0.1305			M292TRK VAN EXP	
X61929	2320 00 440 8318	K	9140 00 273 2377	WV	K	0.0870			M292A1 TRK VAN EXP	
X61929	2320 00 077 1642	K	9140 00 273 2377	WV	K	0.1119			TRUCK VAN M791	
X62081	2320 00 832 5619	K	9140 00 273 2377	WV	K	0.0932			TRUCK VAN M292A5	
X62203	2320 00 699 3746	K	9140 00 273 2377	WV	K	0.1119			M820 TRK VAN EXP	
X62237	2320 00 050 9006	K	9140 00 273 2377	WV	K	0.1119			M291A1 TRK VAN EXP	M
X62237	2320 00 880 4642	K	9140 00 273 2377	WV	K	0.1491			M934 TRK VAN 5T	
X62237	2320 00 047 8750	K	9140 00 273 2377	WV	K	0.1119			M820A2 TRK VAN EXP	
X62271	2320 00 050 9010	K	9140 00 273 2377	WV	K	0.1119			M291A1D TRK VAN EXP	
X62271	2320 00 880 4647	K	9140 00 273 2377	WV	K	0.1740			TRK VAN EX 5T M935	
X62271	2320 01 047 8751	K	9140 00 273 2377	WV	K	0.2237			TRK VAN MOB TV	
X62291	2320 01 091 3203	K	9140 00 273 2377	WV	K	0.2237			TRK VAN TV RECORD	
X62291	2320 01 091 9060	K	9140 00 273 2377	WV	K	0.0932			M109A3 TRK VAN SHP	M
X62340	2320 00 077 1636	K	9140 00 273 2377	WV	K	0.0932			M109A3 TRK VAN SHP	M
X62340	2320 00 440 8313	K	9140 00 273 2377	WV	K	0.1305			M109A1 TRK VAN SHP	
X62340	2320 00 690 8365	K	9130 00 160 1818	WV	K	0.1305			M109 TRK VAN SHOP	
X62340	2320 00 835 8515	K	9130 00 160 1818	WV	K	0.1119			M220 TRK VAN SHOP	
X62340	2320 00 835 8600	K	9130 00 160 1818	WV	K	0.0932			M109A3TRKVANSHP WW	
X62477	2320 00 077 1637	K	9140 00 273 2377	WV	K	0.1305			M109TRK VAN SHP WW	
X62477	2320 00 289 6473	K	9130 00 160 1818	WV	K	0.0932			M109A2TRKVANSHP WW	M
X62477	2320 00 440 8308	K	9140 00 273 2377	WV	K	0.1367			M109A1TRKVANSHP WW	
X62477	2320 00 706 2224	K	9130 00 160 1818	WV	K	0.1305			TRK VAN SHOP 4X2	
X62614	2320 01 091 1662	K	9140 00 273 2377	WV	K	0.1305			TRK VAN OFFICE	
X63094	2320 00 911 5068	K	9130 00 160 1818	WV	K	0.0621			M711 TRK WRK 3/4 T	
X63299	2320 00 051 0489	K	9140 00 273 2377	WV	K	0.1616			M816 TRK WRK 5 TON	
X63299	2320 00 055 9258	K	9140 00 273 2377	WV	K	0.1429			M543A2 TRK WRK 5 T	M
X63299	2320 00 445 0866	K	9130 00 160 1818	WV	K	0.2237			M543 TRK WRK 5 TON	
X63299	2320 00 835 8325	K	9130 00 160 1818	WV	K	0.2237			M62 TRK WRKR 5 TON	
X63299	2320 01 047 4618	K	9140 00 273 2377	WV	K	0.1429			M543A1 TRK WRK 5T	
X63299	2320 01 047 8754	K	9140 00 273 2377	WV	K	0.1491			M936 TRK WRECK 5T	
X63436	2320 00 873 5426	K	9140 00 273 2377	WV	K	0.6214			TRK WRKR 10T M553	
X63573	2320 01 090 7797	K	9140 00 273 2377	WV	K	0.2237			TRK WRECK 34500GWW	
X63847	2320 01 090 7794	K	9140 00 273 2377	WV	K	0.2237			TRK WRECK 1600GWW	
X63984	2320 01 090 7798	K	9140 00 273 2377	WV	K	0.2237			TRK WRECK 3600GWW	
X63984	2320 01 090 7799	K	9140 00 273 2377	WV	K	0.2237			TRK WRECK 44500GWW	
X70772	1925 00 651 5685	B	9140 00 273 2377	AB	H	25.60			TUG DSN 3013	
X70909	1925 00 216 1848	B	9140 00 273 2377	AB	H	59.80			TUG DSN 327DS	
X70909	1925 00 375 3002	B	9140 00 273 2377	AB	H	36.40			TUG DSN 33004	
X71046	1925 00 216 1845	B	9140 00 273 2377	AB	H	24.00			TUG OCN DSN377A	
X71046	1925 00 375 3003	B	9140 00 273 2377	AB	H	73.00			TUG OCN DSN 3006	
Y00039	1915 00 217 2295	B	9140 00 273 2377	OV	H	65.40			VESSEL FRGHT 381	
Y00039	1915 00 217 2299	B	9140 00 273 2377	OV	H	65.40			VSL FRT SPY DS 210	

Y00039	1915 00 317 2300	B	9140 00 273 2377	OV	H	65.40		VESSEL FRGHT 427
Y00039	1915 00 375 2981	B	9140 00 273 2377	OV	H	92.50		VESSEL FRGHT 7013
Y00176	1915 00 375 2984	B	9140 00 273 2377	AB	H	44.19		DESIGN 294A
Y00176	1915 00 375 2985	B	9140 00 273 2377	AB	H	49.70		DESIGN 294AB
Y00176	1915 00 375 2987	B	9140 00 273 2377	AB	H	49.70		VSL LQDCGDSNG7014
Y35143	4610 00 165 4964	B	9130 00 160 1818	SG	H	.75		WTRPURIF 420GPH13
Y35143	4610 00 937 0223	B	9130 00 160 1818	SG	H	.75		WTR PURIF 420 GPH
Y35486	4610 00 202 6925	B	9130 00 160 1818	SV	H	2.50		WTR PURIF TM 1500
Y36034	4610 00 202 8701	B	9130 00 160 1818	SV	H	3.50		WTR PURIF TM 3M GM
Y44282	3431 00 542 0598	M	9140 00 273 2377	SG	H	1.60		WELD GEN ARCH52275
Y44282	3431 00 894 1573	M	9140 00 273 2377	SG	H	1.60		WELD GEN ARCCOW300
Y45652	3431 00 248 9327	M	9130 00 160 1818	SG	H	1.60		WELD GEN ARCGR202
Y46200	3431 00 021 8696	M	9130 00 160 1818	SG	H	1.60		WLD MCH ARC WNG300
Y46200	3431 00 072 0327	M	9130 00 160 1818	SG	H	1.60		WLD MCH ARC LEB300
Y46200	3431 00 163 4345	M	9130 00 160 1818	SG	H	1.60		WLD MCH ARC GR300-S
Y46200	3431 00 204 3831	M	9130 00 160 1818	SG	H	1.60		WLD MCH ARC 326-SK
Y46200	3431 00 239 8186	M	9130 00 160 1818	SG	H	1.60		WLD MCH ARC 3153-S
Y46200	3431 00 351 9209	M	9130 00 160 1818	SG	H	1.60		WLD MCH ARC CH-3153
Y46200	3431 00 360 2787	M	9130 00 160 1818	SG	H	1.60		WLD MCH ASRC SK-300
Y46200	3431 00 529 1409	M	9130 00 160 1818	SG	H	1.60		WLD MCH ARC GH-31835
Y46200	3431 00 633 4652	M	9130 00 160 1818	SG	H	1.60		WLD MCH ARC GB-318
Y46200	3431 00 810 9696	M	9130 00 160 1818	SG	H	1.60		WELD GEN LE300
Y46200	3431 00 845 9487	M	9130 00 160 1818	SG	H	2.00		WLD MCH CHB-3183-S
Y46200	3431 00 991 2961	M	9130 00 160 1818	SG	H	2.00		WLD MACH LE H-300
Y46234	3431 00 253 0558	M	9130 00 160 1818	SG	H	2.60		WELD MACH LTO 300
Y46234	3431 01 032 6289	M	9130 00 160 1818	SG	H	2.60		WLD MCH ARC7550000
Y51851	3950 00 298 3443	K	9140 00 273 2377	SV	H	2.30		WINCHDR P/O 5-3/4T
Y86199	2230 00 356 7427	B	9130 00 160 1818	OV	H	2.33		NORBERG MDL DH
Z04615	1510 00 124 0914	H	9130 00 256 8613	AV	H	100.87		RU21J AIRPLA NE REC
Z13217		K	9130 00 160 1818	WV	M	.18		CAR ARMORED, PER CA
Z13288		K	9140 00 273 2377	TO	M	0.3356		CARRIER CARGO
Z13321		K	9140 00 273 2377	TO	M	.33		CARRIER CARGO
Z13323		S M	9140 00 273 2377	TV	H	1.00	11.80	CARRIER CARGO XM 1015
Z13323	2350 01 136 8745	K	9140 00 273 2377	TV	H	1.00	11.80	CARR VEH XM1015A1
Z13354	2320 01 163 1437	K	9140 00 273 2377	TO	K	0.2796		CARR AMMO 71XM1050
Z13398	2350 01 203 0188	K	9140 00 273 2377	TO	K	0.1616		CARR SMO GN XM1059
Z15142	4940 01 025 9856	M	9140 00 273 2377	SG	H	5.00		STEAM CLEANER
Z20149		K	9140 00 273 2377	CE	H	7.00		CRANE 7-1/2 TYPE 1
Z20160	3810 Z2 016 0001	K	9140 00 273 2377	CE	H	3.00		CRANE WHL MTD 7-1/2
Z29542	10KW GE NO2 9542	B	9140 00 273 2377	GN	H	1.00		10 KW DIESEL GEN
Z29554	10KW GE NO2 9554	B	9140 00 273 2377	GN	H	1.00		10 KW DIESEL GEN
Z29554	6115 00 033 13S9	B	9140 00 273 2377	GN	H	1.09		GEN ST, PU 753/M
Z30172	6115 23 017 2001	B	9130 00 160 1818	GN	H	2.00		GEN SET GTE 10KW
Z30353	6115 01 078 3044	B	9140 00 273 2377	GN	H	18.00		GEN ST MEH 404B
Z32325	1450 01 134 9359	L	9140 00 273 2377	WV	K	0.3107		CARR TR GM ROLAND
Z32420	2350 01 169 2833	M	9140 00 273 2377	TV	H	1.00	5.20	GUN ADA SP M163A2
Z32890	4520 01 081 0773	B	9130 00 160 1818	HG	H	3.25		HEAT DUCT PORTABLE

Table 2-12. Combat Consumption Rates for Bulk Fuels — (Cont'd)

LI	EI NSN	SNSN CMD	FUEL NSN	EQUIP TYP	CONSUMP CD	CONSUMPTION RATES			NOMENCLATURE	MULTIFUEL
						ID/LAV	XCNTY	2NDROS		
Z38195	2320 01 123 1602	K	9140 00 273 2377	WV	K	0.1367			LT ARMD VEH M1047	
Z44650	2340 Z4 465 0001	K	9130 00 160 1818	WV	K	0.0249			MOTORCYCLE XM1030	
Z46347	1520 01 125 5476	H	9130 00 256 8613	AV	H	39.90			CPTR RECON OH-58D	
Z47542	2805 01 118 1275	B	9130 00 160 1818	OV	H	5.00			OUTBOARD MTR 35HP	
Z48447		B	9140 00 273 2377	SV	H	37.00			PETRO HOSELINE SYS	
Z48875		B	9140 00 273 2377	SG	H	36.00			PIPELINE OUTFIT	
Z77257	2350 01 087 1095	K	9140 00 273 2377	TV	H	10.80	56.60	44.64	M1E1 TANK 120MM	
Z90436		K	9140 00 273 2377	WV	K	0.0870			TRACTOR FULL TRCKD	
Z90445		K	9140 00 273 2377	WV	K	1.0875			EXCAVATOR SMALL EQ	
Z93224	2320 Z9 322 4001	K	9140 00 273 2377	WV	K	0.2237			TRUCK CARGO	
Z93546	2320 01 108 0820	K	9140 00 273 2377	WV	K	0.0621			TRK SMEL XM1028A1	
Z93791	3930 01 172 7892	K	9140 00 273 2377	MH	H	1.25			TRK FL 6000 LBS CP	
Z93851	3930 01 172 7891	K	9140 00 273 2377	MH	H	1.25			TRK FL 4000 LBS CP	
Z93961		K	9140 00 273 2377	WV	K	0.0621			TRK MNT TEL XM1057	
Z94111	2320 01 146 7192	K	9140 00 273 2377	WV	K	0.0497			TRK UTILITY XM 1055	
Z94112	1925 Z9 411 2001	B	9140 00 273 2377	AB	H	85.00			TUG HAR BOR WATERWAY	
Z94113	2320 01 148 1638	K	9140 00 273 2377	WV	K	0.0497			TRKSQUADCARRXM1054	
Z94114	1925 Z9 411 4001	B	9140 00 273 2377	AB	H	290.00			TUG ISLAND COASTAL	
Z94115	2320 01 148 1639	K	9140 00 273 2377	WV	K	0.0497			TRKUTILSTINGXN1056	
Z94116	2320 01 146 7187	K	9140 00 273 2377	WV	K	0.0435			TRK UTILITY M1042	
Z94362	2320 01 150 1035	K	9140 00 273 2377	WV	K	0.0497			TRKSQUADCARRXM1053	
Z94363	2320 01 436 4001	K	9130 00 160 1818	WV	K	0.0311			TRK UTIL XM1041	
Z94364		K	9130 00 160 1818	WV	K	0.0311			TRK UTIL FAST ATK	
Z94423	2320 Z9 442 3001	K	9140 00 273 2377	WV	K	0.0746			TRK UTIL GLD1-1/4	
Z98025	3431 01 079 8439	M	9140 00 273 2377	SG	H	3.00			WLD MCH ARC	

Table 2-13. Daily Equipment Usage Rates for Other than Tracked Combat Vehicles (H = Hours; M = Miles)

Equipment Type		Panama					
Code	Nomenclature	Alaska	Canal Zone	CONUS	Europe	Korea	
AB	Amphibious	15H	20H	10H	12H	10H	
AV	Aviation	4H	4H	4H	4H	4H	
CE	Construction	15H	20H	10H	12H	10H	
GN	Generators	20H	20H	20H	12H	20H	
HG	Heating	20H	10H	10H	12H	15H	
MH	Material Handling	10H	20H	20H	12H	20H	
OV	Other Vehicles	10H	10H	10H	12H	10H	
SG	Stationary Equipment — Misc	10H	10H	10H	12H	10H	
SV	Stationary Equipment — Vehicle Mounted	10H	10H	10H	12H	10H	
TO	Tracked Vehicles — Other	40M	25M	50M	62.5M	30M	
WV	Wheeled Vehicles	40M	25M	50M	62.5M	30M	

Table 2-14. Daily Equipment Usage Rates for Tracked Combat Vehicles (Hours)

LIN	NOMENCLATURE	KOREA			EUROPE			ALASKA			PANAMA CANAL ZONE			CONUS		
		IDLE/AV	XCNTY	2NRDS	IDLE/AV	XCNTY	2NRDS	IDLE/AV	XCNTY	2NRDS	IDLE/AV	XCNTY	2NRDS	IDLE/AV	XCNTY	2NRDS
A93125	M551 ARAAV 152MM	6.0	6.5	5.0	6.0	6.5	5.0							4.8	7.7	4.6
C76335	CAV FGT VEH XM3	3.0	5.5	5.5	3.0	5.5	5.5							3.0	5.5	5.5
D10726	M125A1 CARR 81MM	4.1	5.0	5.0	4.0	5.0	5.0	3.0	5.5	3.6				5.0	3.8	1.6
D10741	M106A1 CARR MORTAR	4.1	5.0	5.0	4.0	5.0	5.0	2.9	0.5	3.6				5.3	3.1	4.3
D11538	M577A1 CAR CMD POST	6.0	2.9	5.0	5.0	4.0	4.5	2.4	0.2	1.9	9.6	1.2	6.0	5.8	3.7	1.2
D11668	CARR GM E CHAP M730	4.0	6.0	5.5	4.0	6.0	5.5	4.0	6.0	5.5	4.0	6.0	5.5	4.0	6.0	5.5
D11681	CARR GM EQP LES WE	3.0	5.5	5.5	3.0	3.0	5.5	3.0	5.5	5.5	3.0	5.5	5.5	3.0	5.5	5.5
D12087	M113 CARRIER PERS	3.1	5.5	5.5	3.0	5.5	5.5	3.6	1.9	12.0	6.0	1.2	4.8	7.0	6.8	1.9
E56896	M901 CBT VEH ITV	3.0	5.5	5.5	3.0	5.5	5.5	3.0	5.5	5.5	3.0	5.5	5.5	3.0	5.5	5.5
J81750	INF FGT VEH XM2	3.0	5.5	5.5	3.0	5.5	5.5	3.0	5.5	5.5				3.0	5.5	5.5
J96694	GUN AIRDEF M163	4.1	6.0	5.5	4.0	6.0	5.5							2.4	7.2	4.8
K56981	HOW/HV SP 8IN M110	6.5	3.6	6.0	4.0	6.0	5.5							4.1	1.9	4.1
K57667	M109 HOW SP 155MM	4.1	6.0	5.5	4.0	6.0	5.5							6.2	1.9	2.9
L44894	LAUN-LOAD MLRS	5.0	4.0	4.5	5.0	6.0	4.5	5.0						5.0	4.0	4.5
T13169	TANK, M60A3 TTS	4.6	6.5	4.6	5.0	6.5	5.0							4.2	8.5	2.9
T13374	M1 TANK 105MM	5.2	3.3	3.4	5.0	6.5	4.5	5.2	3.3	3.4				5.2	3.3	3.4
V13101	M60A1 TANK 105MM	4.6	6.5	4.6	4.5	6.5	4.5							4.2	8.5	2.9
Z32424	GUN AIR DEF XM247	5.0	6.5	5.0	5.0	6.5	5.0	5.0						5.0	6.5	5.0
Z77257	M1E1 TANK 120MM	5.2	3.3	3.4	5.0	6.5	5.0	5.2	3.3	3.4				5.2	3.3	3.4

Table 2-15. Class III Bulk Planning Factors**INSTRUCTIONS FOR USE**

Computations are based on consumption rates provided in SB 710-23 and represent 1 hour of operation for all equipment categories except for the wheeled vehicle category, which is based on consumption rates for one kilometer. Planners should be aware of the constant updating of consumption rates in the supply bulletin. The POL (petroleum, oils, and lubricants) consuming equipment categories and codes are shown below.

CODE	CATEGORY	POL-Consuming Equipment Categories					
		CODE	CATEGORY	CODE	CATEGORY	CODE	CATEGORY
AB	Amphibious Equipment	SG	Stationary Equipment — Miscellaneous	SR	Tracked Vehicles — Secondary Roads		
CE	Construction	SV	Stationary Equipment — Vehicle Mounted	WV	Wheeled Vehicles		
GN	Generators	TI	Tracked Vehicles — Idle	OV	Other Vehicles		
HG	Heating Equipment	CC	Tracked Vehicles — Cross Country	AV	Aviation		
MH	Materials Handling Equipment						

Once the rate for 1 hour of operation has been established, the usage profile can be used to compute the daily rate of consumption. Remember, all equipment categories are based on hours of operation except wheeled vehicles which are based on kilometers. Examples are given below to illustrate how to use the usage profiles to get a daily rate.

Example No 1. Compute the total POL requirements for one tank battalion (SRC 17235J410) equipped with M60 in a heavy armored division (SRC 87000J410) for 1 day of operation for all categories of equipment, using European usage profile No. 072.

$$\text{Total MOGAS} = 3.9(12) + 23.6(12) + 16.0(12) = 522 \text{ gal/day}$$

$$\text{Total Diesel} = 0.6(12) + 7.0(12) - 165.4(4.2) + 2121.9(5.7) + 1560.5(5.5) + 1.1(101) = 21,574.56 \text{ gal/day}$$

There is no requirement for aviation fuel in this unit.

Example No. 2. Compute total POL requirements for a Cavalry Brigade Air Attack (SRC 17201J210) in a Heavy Division Mechanized (SRC 78000J220) for 1 day of operation for all categories of equipment, using the Canal Zone usage profile No. 075.

$$\text{Total MOGAS} = 103.8(20) + 109.2(10) + 1.5(20) + 75.6(10) = 3,954 \text{ gal/day}$$

$$\begin{aligned} \text{Total Diesel} &= 46.0(20) + 49.8(20) + 18.9(20) + 59.0(10) + 89.0(4.6) + 1067.6(4.5) + \\ &668.7(5.3) + 5.1(40.2) + 0.6(10) = 11,852.73 \text{ gal/day} \end{aligned}$$

$$\text{JP-4} = 10,557.0(4) = 42,228 \text{ gal/day}$$

Standard Usage Profiles

Standard — 001

AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
12	12	12	12	12	12	12	3.8	5.6	5.1	100	12	04

POL Intense — 002

AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
12	12	12	12	12	12	12	3.9	5.8	5.3	100	12	04

WAFF Rates—0													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
12	12	12	12	12	12	12	12	3.8	5.6	5.1	100	04	
Light Division Europe—004													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
12	12	12	12	12	12	12	3.8	5.6	5.1	100	12	06	
Light Division Middle East—005													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
0.1	12	12	12	12	12	12	3.8	5.6	5.1	100	12	06	
Light Division Europe—004													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
12	12	12	12	12	12	12	3.8	5.6	5.1	100	12	06	
Light Division Middle East—005													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
0.1	12	12	12	12	12	12	3.8	5.6	5.1	100	12	06	
Ar tic—006													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
15	15	20	20	10	10	10	10.7	1.1	1.0	64.4	08	04	
Pacific—007													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
10	10	20	15	20	10	10	15.7	1.5	1.4	48	10	04	
CONUS—071													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
10	10	20	10	20	10	10	4.5	5.2	3.9	80	10	04	
Europe—072													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
12	12	12	12	12	12	12	4.2	5.7	5.5	101	12	04	
Korea—073													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
10	10	20	15	20	10	10	4.4	5.2	5.0	48.3	10	04	
Alaska—074													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
15	15	20	20	10	10	10	3.7	3.7	5.0	64.4	10	04	
Canal Zone—075													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
20	20	20	10	20	10	10	4.6	4.5	5.3	40.2	10	4	
Echelon Above Corp, Middle East—850													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
10	20	20	10	20	12	12	3.8	5.6	5.1	64.4	12	2.1	
Echelon Above Corp, Middle East—851													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
10	10	20	15	20	10	10	4.4	5.2	5.1	48.3	10	2.1	
Echelon Above Corp, Europe—852													
AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
12	12	12	12	12	12	12	3.8	5.6	5.1	100	12	2.1	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY																
INF DIV E/W RIB BRG (SRC 07000H010)																
SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
03087H700	NBC COMPANY	MOGAS	0.0	0.0	1.1	0.0	0.0	35.2	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	
		MOGAS	0.0	0.0	0.8	77.5	0.0	73.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
03107H000	NBC COMPANY	DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	5.0	43.0	44.5	7.3	0.0		
		MOGAS	0.0	4.0	21.0	39.8	0.0	67.1	0.0	0.0	0.0	0.0	0.1	0.0		
		DIESEL	86.4	255.2	2.8	0.0	8.5	29.0	0.0	43.0	457.1	333.0	25.6	0.0		
05156H700	HHG, ENGR BN, INF DIV	MOGAS	0.0	2.5	10.1	9.4	0.0	16.4	0.0	0.0	0.0	0.0	0.1	0.0		
		DIESEL	0.0	39.5	0.6	0.0	8.5	7.0	0.0	2.0	36.8	25.5	7.3	0.0		
		MOGAS	0.0	0.5	3.4	7.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
05157H700	ENGR CO, ENGR BN, INF DIV	DIESEL	0.0	67.5	0.6	0.0	0.0	5.0	0.0	10.5	100.6	74.3	3.3	0.0		
		MOGAS	0.0	0.0	0.8	7.6	0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	86.4	13.1	0.6	0.0	0.0	7.0	0.0	9.4	118.5	84.4	8.4	0.0		
05158H710	BRG CO, EN BN, RIBBON	MOGAS	0.0	0.0	128.3	102.4	0.0	124.1	0.0	0.0	0.0	0.0	0.2	0.0		
		DIESEL	0.0	0.0	34.9	0.0	0.0	5.0	0.0	17.8	159.8	173.8	83.5	1.7		
		MOGAS	0.0	0.0	24.5	22.0	0.0	26.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
06125H000	FA BN, 155MM TOWED (DS)	DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.7	0.0		
		MOGAS	0.0	0.0	13.1	5.4	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0		
06126H000	HHB 155MM T, FA BN	MOGAS	0.0	0.0	2.7	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0		
		MOGAS	0.0	0.0	3.3	5.8	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
06129H000	SVC BTRY, 155MM T, FA BN	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0		
		MOGAS	0.0	0.0	15.3	16.6	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	11.4	0.0		
06155H000	FA BN, 105MM T, INF DIV	MOGAS	0.0	0.0	11.2	5.4	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0		
		MOGAS	0.0	0.0	1.1	1.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
06156H000	HHB, FA BN, 105MM TOWED	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0		
		MOGAS	0.0	0.0	0.8	5.8	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.2	0.0		
06157H000	FA BTRY, 105MM T, FA BN	MOGAS	0.0	0.0	17.4	25.6	0.0	30.4	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	17.8	159.8	173.8	18.6	1.7		
		MOGAS	0.0	0.0	12.4	5.4	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
06159H000	SVC BTRY, FA BN, 105MM T	DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	2.0	17.2	17.8	2.8	1.7		
		MOGAS	0.0	0.0	0.8	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0		
06166H000	FA BTRY, 155M T, FA BN	MOGAS	0.0	0.0	1.7	5.8	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	2.0	36.8	25.5	5.6	0.0		
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
06169H000	SVC BTRY, 155MM T/8 IN SP	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OY	AV
17307H700	AR CAN TP, AR CV SQ	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	408.9	304.1	0.4	0.0	
17387H720	ATTACK HELICOPTER COMPANY	MOGAS	0.0	0.0	10.6	5.4	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.1	0.0	
		JP4													
19017H710	MP CO, AIM DIV	MOGAS	0.0	0.0	3.5	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.0	0.0	
29001H000	SUPPORT COMMAND, INF DIV	MOGAS	0.0	0.0	137.0	183.1	0.0	164.2	0.0	0.0	0.0	0.0	0.2	0.0	438.0
		DIESEL	0.0	98.0	148.3	0.0	122.7	56.3	0.0	8.6	74.3	68.4	75.8	0.0	
29002H700	HHC, SPT COMD, AIM DIV	MOGAS	0.0	0.0	0.8	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
		JP4													
29003H500	DIV MMC, AIM DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	
29005H000	S&T BN, INF DIV	MOGAS	0.0	0.0	11.0	23.8	0.0	18.4	0.0	0.0	0.0	0.0	0.0	0.0	438.0
		DIESEL	0.0	70.0	0.6	0.0	77.6	18.3	0.0	0.0	0.0	0.0	20.9	0.0	
29006H000	HHD, S&T BN, AIM DIV	MOGAS	0.0	0.0	0.8	10.8	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
		JP4													
29015H000	MAINT BN, INF DIV	MOGAS	0.0	0.0	76.5	112.3	0.0	79.8	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	28.0	115.1	0.0	45.1	33.0	0.0	8.6	74.3	68.4	37.9	0.0	
29016H000	HQ & LT MAINT CO, MAINT BN	MOGAS	0.0	0.0	11.4	12.5	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0
		DIESEL	0.0	0.0	18.0	0.0	19.6	0.0	0.0	0.0	0.0	0.0	7.2	0.0	
29017H000	FWD SPT CO, MAINT BN	MOGAS	0.0	0.0	11.3	19.6	0.0	17.7	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	7.0	15.2	0.0	8.5	7.0	0.0	2.2	12.5	14.3	5.8	0.0	
29018H000	HEAVY MAINT CO, MAINT BN	MOGAS	0.0	0.0	13.3	29.4	0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	7.0	21.2	0.0	0.0	7.0	0.0	2.0	36.8	25.5	6.0	0.0	
34165H810	CEWI BN, INF DIV	MOGAS	0.0	0.0	114.6	20.6	0.0	19.7	0.0	0.0	0.0	0.0	0.0	0.0	438.0
		DIESEL	0.0	0.0	1.5	0.0	0.0	17.0	0.0	0.0	0.0	0.0	13.9	0.3	
		JP4													
34166H810	HQ/HQ & OP CO, CEWI BN	MOGAS	0.0	0.0	21.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.5	0.0	0.0	12.0	0.0	0.0	0.0	0.0	3.5	0.0	
		JP4													
34167H810	C&J CO, CEWI BN (INF														

Table 2-15. Class III Bulk Planning Factors — (Cont'd)

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
SEP INF BDE WM4T6 1005 ADP (SRC 07100H020) — Cont'd

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
12147H600	ADMIN CO, SEP BDE	MOGAS	0.0	0.0	2.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	
17307H700	AR CAV TP, AR CV SQ, AM D	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	408.9	304.1	0.4	0.0	
29076H000	HHD, SPT BN, SEP AIM BDE	MOGAS	0.0	0.0	3.9	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	
29077H000	S&T CO, SPT BN, SEP AIM BDE	MOGAS	0.0	0.0	3.4	7.6	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	28.0	12.0	0.0	22.6	0.0	0.0	0.0	0.0	0.0	9.5	0.0	
29099H000	MNT CO, SPT BN SEP INF BDE	MOGAS	0.0	0.0	11.9	27.6	0.0	30.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	7.0	28.1	0.0	9.8	7.0	0.0	2.0	36.8	25.5	5.9	0.0	
29135H000	SPT BN SEP INF BDE	MOGAS	0.0	0.0	28.7	57.5	0.0	65.2	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	35.0	73.1	0.0	32.4	12.0	0.0	2.0	36.8	25.5	22.2	0.0	
29176H910	HHC, SPT BN, SEP AIM/BN/IDL	MOGAS	0.0	0.0	0.8	7.1	0.0	5.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	
34114H110	MI CO (CEM) SEP INF BDE	MOGAS	0.0	0.0	53.4	9.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.9	0.2	438.0

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
ARMED DIV E/W MAT6/CL60 BRG (SRC 17000H020)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
05145H720	ENGR BN, ARMED/MECH DIV	MOGAS	40.0	4.5	24.0	49.2	0.0	81.7	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	72.0	141.1	3.4	0.0	8.5	38.0	0.0	106.5	1070.4	890.8	28.3	0.0	
05146H700	HHC, ENGR BN	MOGAS	0.0	2.5	8.1	9.4	0.0	15.5	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	37.9	0.6	0.0	8.5	11.0	0.0	7.0	99.3	77.8	8.8	0.0	
05147H700	ENGR CO, ENGR BN	MOGAS	0.0	0.5	3.4	7.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	22.5	0.6	0.0	0.0	5.0	0.0	22.5	213.2	182.1	1.7	0.0	
05148H720	BRG CO, EN BN, MAT6/CL60	MOGAS	40.0	0.0	2.5	9.4	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	72.0	13.1	0.6	0.0	0.0	7.0	0.0	9.4	118.5	84.4	12.7	0.0	
06300H000	ARMED DIV ARTILLERY	MOGAS	0.0	0.0	87.3	98.8	0.0	118.8	0.0	0.0	0.0	0.0	0.3	0.0	
		DIESEL	0.0	0.0	36.1	0.0	0.0	25.0	0.0	212.8	1375.2	1694.5	62.1	30.5	
06302H000	HHR, DIV ARTY, ARMED/INF (MECH)	MOGAS	0.0	0.0	26.3	5.4	0.0	8.4	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	9.8	0.0	0.0	5.0	0.0	1.0	8.6	8.9	5.9	0.0	
06307H600	TGT ACQ BTRY, AIM DIV	MOGAS	0.0	0.0	11.6	5.4	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	
06365H000	FA BN, 155MM SP, ARMED/MEC	MOGAS	0.0	0.0	11.0	22.0	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	53.0	314.8	398.5	13.0	9.3	

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
17042H000	HHC ARMD DIV BDE	MOGAS	0.0	0.0	8.9	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	64.1	67.7	1.9	0.0	
		MOGAS	0.0	0.0	60.1	58.0	0.0	41.7	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	32.0	22.3	0.0	19.6	20.0	0.0	0.0	0.0	0.0	26.4	0.0	
17085H700	CBT AVN BN, ARMD/MECH DIV	JP4													12218.4
		MOGAS	0.0	0.0	6.2	9.8	0.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	
		MOGAS	0.0	0.0	14.5	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	
17087H000	AVN CO, ARMD/INF (MECH)	DIESEL	0.0	8.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.0	0.0	2760.8
		JP4													
		MOGAS	0.0	0.0	20.9	37.6	0.0	28.4	0.0	0.0	0.0	0.0	0.4	0.0	
		DIESEL	0.0	8.0	0.6	0.0	1.3	12.0	0.0	110.2	1377.7	1043.5	15.1	0.0	
17105H020	ARMED CAV SQDN AR/MECH DIV	JP4													2260.0
		MOGAS	0.0	0.0	6.1	29.6	0.0	22.4	0.0	0.0	0.0	0.0	0.0	0.1	
		DIESEL	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	13.0	150.9	131.2	9.3	
		MOGAS	0.0	0.0	14.9	8.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.2	
17108H000	AIR CAV TRP ARMD CAV SQDN	DIESEL	0.0	8.0	0.6	0.0	1.3	5.0	0.0	0.0	0.0	0.0	4.4	0.0	2260.0
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	408.9	304.1	0.4		
17307H700	AR CAV TP, AR CV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	10.6	5.4	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.1	0.0	
17387H720	ATTACK HELICOPTER COMPANY	JP4													3391.8
		MOGAS	0.0	0.0	3.5	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	2.0	
		MOGAS	0.0	0.0	0.8	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	
29002H700	HHC, SPT COMD, AIM DIV	DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	
		MOGAS	0.0	0.0	0.8	10.8	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
29003H500	DIV MMC, AIM DIV	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.8	10.8	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
29006H000	HHD, S&T BN, AIM DIV	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	141.8	216.8	3.0	250.2	0.0	0.0	0.0	0.0	0.2	0.0	
29021H000	SUPPORT COMMAND, ARMD DIV	DIESEL	0.0	98.0	190.9	0.0	131.2	61.8	0.0	8.0	147.0	102.2	94.4	0.0	
		MOGAS	0.0	0.0	115.3	128.4	0.0	188.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	28.0	110.7	0.0	53.6	40.5	0.0	8.0	147.0	102.2	50.6	0.0	
		MOGAS	0.0	0.0	9.7	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
29035H000	MAINT BN, ARMD DIV	DIESEL	0.0	0.0	23.3	0.0	19.6	0.0	0.0	0.0	0.0	0.0	7.8	0.0	
		MOGAS	0.0	0.0	25.6	21.4	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	12.8	0.0	8.5	7.0	0.0	0.0	2.0	36.8	25.5	9.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29036H000	HQ & LT MAINT CO, MAINT B	DIESEL	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29037H000	FORWARD SPT CO, MAINT BN	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

29038H000	HEAVY MAINT CO, MAINT BN	MOGAS	0.0	0.0	13.3	43.2	0.0	43.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	7.0	20.2	0.0	8.5	14.5	0.0	2.0	36.8	25.5	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29115H000	S&T BN, ARMD DIV	MOGAS	0.0	0.0	8.5	22.8	0.0	29.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	70.0	30.6	0.0	77.6	18.3	0.0	0.0	0.0	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29255H920	MAINT BN, ARMORED DIVISION	MOGAS	0.0	0.0	83.9	147.0	3.0	154.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	28.0	127.7	0.0	53.6	38.5	0.0	8.0	147.0	102.2	51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29256H920	HH & LT MAINT CO, MAINT BN	MOGAS	0.0	0.0	8.2	12.5	3.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	21.6	0.0	19.6	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29257H920	FORWARD SPT CO, MAINT BN	MOGAS	0.0	0.0	16.0	24.5	0.0	34.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	7.0	18.2	0.0	8.5	7.0	0.0	2.0	36.8	25.5	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29258H920	HEAVY MAINT CO, MAINT BN	MOGAS	0.0	0.0	12.2	47.6	0.0	41.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	7.0	22.7	0.0	8.5	12.5	0.0	2.0	36.8	25.5	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44325H000	ADA BN, AIM DIVISION	MOGAS	0.0	0.0	64.6	25.6	0.0	30.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	7.1	0.0	0.0	5.0	0.0	74.8	411.4	611.2	19.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44326H000	HHB, ADA BN, C/V, SP	MOGAS	0.0	0.0	25.7	7.6	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	7.1	0.0	0.0	5.0	0.0	2.0	17.2	17.8	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44327H000	ADA BTRY, VULSP/STINGER	MOGAS	0.0	0.0	8.6	3.6	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	109.3	205.9	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44328H000	ADA BTRY, CHAP/SP/STINGER	MOGAS	0.0	0.0	10.8	5.4	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	87.8	90.8	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55087H000	TRANS MTR TRANS CO, ARMD	MOGAS	0.0	0.0	3.8	8.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55427H020	TRANS ACFT MNT CO ARMECH DIV	MOGAS	0.0	0.0	6.4	16.2	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	8.0	20.1	0.0	18.3	5.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57057H320	CBT SPT AVN CO	JP4																			
		MOGAS	0.0	0.0	11.7	21.1	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		JP4																			
			</																		

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
ARMED CAV REGT E/W M60 (SRC 17051H040)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
05108H600	ENGINEER COMPANY, ACR	MOGAS	0.0	0.5	4.2	9.4	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	27.5	0.6	0.0	8.5	7.0	0.0	35.5	381.8	309.5	5.6	0.0	
06037H000	FA BTRY, 155MM SP, ACS	MOGAS	0.0	0.0	3.0	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	79.4	105.5	2.4	2.8	
08147H000	MED CO, SEP AIM BDE, ACR	MOGAS	0.0	0.0	10.4	11.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.1	0.0	
12147H600	ADMIN CO, SEP BDE	MOGAS	0.0	0.0	2.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	
17027H010	TK CO AR CAV SQ EDPW MBT	MOGAS	0.0	0.0	0.0	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.0	496.4	353.9	0.7	0.0	
17051H040	ARMED CAV REG E/W M60	MOGAS	0.0	0.5	112.9	264.8	0.0	191.7	5.0	0.0	0.0	0.0	1.3	0.0	
		DIESEL	0.0	79.5	52.7	0.0	50.7	55.0	0.0	550.3	6646.6	5175.4	99.6	8.4	
		JP4													7269.2

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
ARMED CAV REGT E/W M60 (SRC 17051H040) – Cont'd

[illegible]

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
ARMD CAV REGT E/W M1/M3 (SRC 17051J320) — Cont'd

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	S6	SV	TI	CC	SR	WV	OV	AV
17051J320	ARMD CAV REGT E/W M1/M3	MOGAS	0.0	0.5	93.3	254.3	0.0	242.9	0.0	0.0	0.0	0.0	0.5	0.0	5420.2
		DIESEL	0.0	71.5	101.6	0.0	46.8	80.0	0.0	1743.1	11744.5	8898.1	102.4	8.4	
		Jp4													
		MOGAS	0.0	0.0	9.7	5.4	0.0	9.4	0.0	0.0	0.0	0.0	0.1	0.0	
17052J310	HHT, ACR	DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	10.0	105.6	96.7	4.5	0.0	5420.2
17055J320	ARMD CAV SQDN ACR M1/M3	MOGAS	0.0	0.0	6.9	43.4	0.0	35.3	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	17.0	0.0	558.2	3647.3	2746.9	15.8	2.8	
		MOGAS	0.0	0.0	3.9	23.8	0.0	27.3	0.0	0.0	0.0	0.0	0.1	0.0	
17056J320	HHT, ARMD CAV SQDN	DIESEL	0.0	0.0	0.6	0.0	0.0	17.0	0.0	29.8	354.9	283.7	11.6	0.0	5420.2
17057J320	ARMD CAV TRP, ACS M1/M3	MOGAS	0.0	0.0	0.0	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	120.0	791.8	566.1	0.4	0.0	
		MOGAS	0.0	0.0	10.6	11.1	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	
17059H700	AVN SPT TRP ACR	DIESEL	0.0	8.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.0	0.0	2028.4
		Jp4													
		MOGAS	0.0	0.0	10.6	5.4	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.1	0.0	
17387H720	ATTACK HELICOPTER COMPANY	Jp4													3391.8
		MOGAS	0.0	0.0	3.9	9.4	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	21.0	12.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	12.9	0.0	
		MOGAS	0.0	0.0	17.3	61.0	0.0	62.3	0.0	0.0	0.0	0.0	0.0	0.0	
43087J320	MAINT TRP SPT M1, M3, FSE	DIESEL	0.0	7.0	41.0	0.0	17.0	7.0	0.0	15.0	246.4	179.9	15.6	0.0	3391.8
63065J320	SPT SQDN ACR (M1/M3)	MOGAS	0.0	0.0	37.5	92.8	0.0	90.2	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	28.0	97.6	0.0	38.3	12.0	0.0	23.0	315.2	251.1	35.9	0.0	
		MOGAS	0.0	0.0	5.9	7.6	0.0	5.0	0.0	0.0	0.0	0.0	0.1	0.0	
63066J300	HHT, SPT SQDN, ACR	DIESEL	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
ARMD CAV REGT (SRC 17051J330)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	S6	SV	TI	CC	SR	WV	OV	AV
01257J430	CBT SPT AVN CO (ACR) UH-6	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2130.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	
		Jp4													
		MOGAS	0.0	0.0	0.8	4.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	
03207J300	NBC CO - ACR (XXX-86)	DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	9.0	77.4	80.1	2.8	0.0	2130.0
05108J300	ENGINEER COMPANY, ACR	MOGAS	0.0	0.5	4.2	9.4	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	27.5	0.6	0.0	8.5	7.0	0.0	35.5	381.8	309.5	5.8	0.0	
		MOGAS	0.0	0.0	19.9	23.8	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	
06565J300	FA BN 155 SP ACR	DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	72.4	432.5	545.0	15.3	11.0	2130.0
		MOGAS	0.0	0.0	12.8	5.4	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	7.0	60.2	62.3	2.8	4.3	
		MOGAS	0.0	0.0	12.8	5.4	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	
06566J300	HHB, FA BN 155SP (ACR)	DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	7.0	60.2	62.3	2.8	4.3	

**SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
SEP ARMD BDE WM4T6 1005 ADP (SRC 17100H020)**

	SFC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
05127H020	ENGR CO, SEP ARMD BDE,MAT	MOGAS	0.0	0.5	4.2	11.2	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	889.4
		DIESEL	43.2	37.1	0.6	0.0	8.5	35.5	381.8	309.5	10.8	0.0	0.0			
06367H000	FA BTRY, FA BN, 155MM, SP	MOGAS	0.0	0.0	0.8	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	451.4
		DIESEL	0.0	0.0	0.0	0.0	0.0	14.2	79.4	105.5	1.7	1.7	0.0			
06369H000	SVC BTRY, FA BN, 155MM SP	MOGAS	0.0	0.0	1.7	5.8	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	4.4	25.0	28.6	4.9	0.0	0.0			
06375H000	FA BN, 155 SP, SEP AR BDE	MOGAS	0.0	0.0	23.8	22.0	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	889.4
		DIESEL	0.0	0.0	3.6	0.0	0.0	53.0	314.8	398.5	13.7	7.9	0.0			
06376H000	HHB, FA BN, 155MM SP	MOGAS	0.0	0.0	19.6	5.4	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	451.4
		DIESEL	0.0	0.0	3.0	0.0	0.0	6.0	51.6	53.4	3.6	2.8	0.0			
08147H000	MED CO, SEP AIM BDE, ACR	MOGAS	0.0	0.0	10.4	11.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	889.4
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0			
12147H600	ADMIN CO, SEP BDE	MOGAS	0.0	0.0	2.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	451.4
		DIESEL	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0			
17100H020	SEP ARMD BDE WMAT6,100GAD	MOGAS	0.0	0.5	134.6	126.5	0.0	138.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	889.4
		DIESEL	43.2	72.1	79.3	0.0	40.9	140.1	1283.8	1185.5	60.0	8.1	0.0			
		JP4														
17102H000	HHC SEPARATE ARMORED BDE	MOGAS	0.0	0.0	37.5	11.2	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.1	0.0	451.4
		DIESEL	0.0	0.0	3.6	0.0	0.0	6.0	51.6	53.4	6.0	0.0	0.0			
		JP4														
17307H700	AR CAV TP, AR CV SQ, AM DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	451.4
		DIESEL	0.0	0.0	0.0	0.0	0.0	32.4	408.9	304.1	0.4	0.0	0.0			
29075H000	SPT BN, SEP ARMD BDE	MOGAS	0.0	0.0	34.9	69.1	0.0	70.8	0.2	0.0	0.0	0.0	0.0	0.1	0.0	451.4
		DIESEL	0.0	35.0	71.6	0.0	32.4	2.0	36.8	25.5	24.7	0.0	0.0			
29076H000	HHD, SPT BN, SEP AIM BDE	MOGAS	0.0	0.0	3.9	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	451.4
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0			
29077H000	S&T CO, SPT BN, SEP AIM BDE	MOGAS	0.0	0.0	3.4	7.6	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	451.4
		DIESEL	0.0	28.0	12.0	0.0	22.6	0.0	0.0	0.0	0.0	9.5	0.0			
29079H010	MNT CO,SPT BN,SEP ARMD BDE	MOGAS	0.0	0.0	18.1	39.2	0.0	36.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	438.0
		DIESEL	0.0	7.0	26.6	0.0	9.8	7.0	0.0	0.0	2.0	36.8	25.5	8.3	0.0	
29176H910	HHC,SPT BN,SEP AIM/ABN/D(I)	MOGAS	0.0	0.0	0.8	7.1	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0
		DIESEL	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0			
34114H120	MI CO (CEW)ACR/SEP HV BDE	MOGAS	0.0	0.0	34.1	13.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	11.2	89.9	94.4	4.1	0.2	
		JP4														

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
AIR CAV CBT BDE (SRC 17200H500)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
11059H500	SIGNAL CO, ACCB	MOGAS	0.0	0.0	26.1	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
		MOGAS	0.0	25.0	253.6	182.3	0.0	168.6	12.0	0.0	0.0	0.0	2.0	2.6	
		DIESEL	0.0	119.6	92.8	0.0	132.7	62.0	0.0	0.0	0.0	0.0	90.0	0.0	41448.8
17202H500	HHT AIR CAB CBT BDE	MOGAS	0.0	0.0	6.4	3.6	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		JP4													689.6
		MOGAS	0.0	0.0	58.5	51.8	0.0	24.6	0.0	0.0	0.0	0.0	1.0	0.0	
17205H220	AIR CAV SODN ACCB	DIESEL	0.0	24.0	1.7	0.0	7.8	15.0	0.0	0.0	0.0	0.0	20.0	0.0	7216.0
		JP4													
		MOGAS	0.0	0.0	13.9	27.8	0.0	18.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	436.0
17208H220	AIR CAV TRP ACS ACCB	JP4													
		MOGAS	0.0	0.0	14.9	8.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	2.6	5.0	0.0	0.0	0.0	0.0	5.0	0.0	2260.0
		JP4													
17385H500	ATTACK HELICOPTER BN	MOGAS	0.0	0.0	58.6	25.6	0.0	29.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	24.0	1.7	0.0	0.0	15.0	0.0	0.0	0.0	0.0	16.0	0.0	10599.4
		JP4													
		MOGAS	0.0	0.0	11.5	25.6	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	
17386H500	HHC ATK HEL BN	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													424.0
		MOGAS	0.0	0.0	15.7	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.0	0.0	3391.8
17387H710	ATK HEL CO, ATK HEL BN	JP4													
		MOGAS	0.0	0.0	25.0	75.8	0.0	76.8	12.0	0.0	0.0	0.0	1.0	2.6	
		DIESEL	0.0	47.6	85.9	0.0	124.9	12.0	0.0	0.0	0.0	0.0	33.0	0.0	12344.4
		JP4													
29155H500	SUPPORT BATTALION, ACCB	MOGAS	0.0	0.0	1.6	9.4	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	7.0	5.0	15.2	0.0	27.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	14.6	13.5	0.0	98.1	0.0	0.0	0.0	0.0	0.0	17.0	0.0	
29156H500	HQ,HQ CO,SPT BN ACCB	MOGAS	0.0	0.0	6.0	23.6	0.0	18.7	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	7.0	25.1	0.0	9.8	0.0	0.0	0.0	0.0	5.0	0.0	
		MOGAS	0.0	6.0	14.3	12.2	0.0	12.3	6.0	0.0	0.0	0.0	1.0	0.0	
		DIESEL	0.0	6.0	1.7	0.0	8.5	0.0	0.0	0.0	0.0	0.0	3.0	0.0	12036.4
29157H500	SUP-TRANS CO, SPT BN, ACC	JP4													
		MOGAS	0.0	12.0	18.5	15.3	0.0	8.9	6.0	0.0	0.0	0.0	0.0	2.6	
		DIESEL	0.0	20.0	27.6	0.0	8.5	5.0	0.0	0.0	0.0	0.0	6.0	0.0	308.0
		JP4													
29158H500	MAINT CO, SPT BN, ACCB	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
55417H500	TRANS ACFT MAINT CO	JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													

[illegible]

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
05145H/20	ENGR BN, ARM/MECH DIV	MOGAS	40.0	4.5	24.0	49.2	0.0	81.7	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	72.0	141.1	3.4	0.0	8.5	38.0	0.0	106.5	1070.4	890.8	28.3	0.0	
05146H/00	HHQ, ENGR BN	MOGAS	0.0	2.5	8.1	9.4	0.0	15.5	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	37.9	0.6	0.0	8.5	11.0	0.0	7.0	99.3	77.8	8.8	0.0	
05147H/00	ENGR CO, ENGR BN	MOGAS	0.0	0.5	3.4	7.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	22.5	0.6	0.0	0.0	5.0	0.0	22.5	213.2	182.1	1.7	0.0	
05148H/20	BRG CO, EN BN, MAT6/CL60	MOGAS	40.0	0.0	2.5	9.4	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	72.0	13.1	0.6	0.0	0.0	7.0	0.0	9.4	118.5	84.4	12.7	0.0	
06300H020	INF(M) DIV ARTILLERY	MOGAS	0.0	0.0	85.7	98.8	0.0	118.8	0.0	0.0	0.0	0.0	0.3	0.0	
		DIESEL	0.0	0.0	36.1	0.0	0.0	25.0	0.0	211.8	1366.6	1685.6	61.8	29.7	
06302H000	HHB, DIVARTY, ARM/INF(MECH)	MOGAS	0.0	0.0	26.3	5.4	0.0	8.4	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	9.8	0.0	0.0	5.0	0.0	1.0	8.6	8.9	5.9	0.0	
06307H600	TGT ACQ BTRY, AIM DIV	MOGAS	0.0	0.0	11.6	5.4	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	
06365H000	FA BN, 155MM SP, RMD/MEC	MOGAS	0.0	0.0	11.0	22.0	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	53.0	314.8	398.5	13.0	9.3	

**SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
INF DIV (MECH) E/W M4T6 (SRC 37000H020)**

	SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
	17087H000	AVN CO,ARMY/INF (MECH)	MOGAS	0.0	0.0	14.5	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	2760.8
			DIESEL	0.0	8.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.0	0.0	
			JP4													
			MOGAS	0.0	0.0	20.9	37.6	0.0	28.4	0.0	0.0	0.0	0.0	0.0	0.0	
	17105H020	ARMY CAV SQDN ARMECH DIV	DIESEL	0.0	8.0	0.6	0.0	1.3	12.0	0.0	110.2	1377.7	1043.5	15.1	0.0	2260.0
			JP4													
			MOGAS	0.0	0.0	6.1	29.6	0.0	22.4	0.0	0.0	0.0	0.0	0.0	0.0	
			DIESEL	0.0	0.0	0.0	0.0	0.0	7.0	0.0	13.0	150.9	131.2	9.3	0.0	
	17108H000	AR CAV TRP ARMY CAV SQDN	MOGAS	0.0	0.0	14.9	8.0	0.0	3.0	0.0	0.0	0.0	0.0	0.2	0.0	2260.0
			DIESEL	0.0	8.0	0.6	0.0	1.3	5.0	0.0	0.0	0.0	0.0	4.4	0.0	
			JP4													
			MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
	17307H700	AR CAV TP, AR CV SQ, AM DIV	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	408.9	304.1	0.4	0.0	3391.8
			MOGAS	0.0	0.0	10.6	5.4	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	
			DIESEL	0.0	8.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.1	0.0	
			JP4													
	19017H710	MP CO, AIM DIV	MOGAS	0.0	0.0	3.5	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	3391.8
			DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.0	0.0	
			MOGAS	0.0	0.0	0.8	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	
			DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
	29003H500	DIV MMG, AIM DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3391.8
			DIESEL	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	
			MOGAS	0.0	0.0	0.8	10.8	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
			DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
	29011H000	SUPPORT CMD, INF DIV (MECH)	MOGAS	0.0	0.0	140.8	216.8	4.0	227.6	0.0	0.0	0.0	0.0	0.2	0.0	3391.8
			DIESEL	0.0	98.0	190.9	0.0	131.2	61.8	0.0	8.0	147.0	102.2	92.5	0.0	
			MOGAS	0.0	0.0	97.3	128.4	0.0	127.2	0.0	0.0	0.0	0.0	0.0	0.0	
			DIESEL	0.0	28.0	123.8	0.0	53.6	83.5	0.0	8.0	147.0	102.2	46.1	0.0	
	29025H000	MAINT BN, INF DIV (MECH)	MOGAS	0.0	0.0	5.5	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	3391.8
			DIESEL	0.0	0.0	37.8	0.0	19.6	0.0	0.0	0.0	0.0	0.0	8.3	0.0	
			MOGAS	0.0	0.0	22.6	25.4	0.0	23.6	0.0	0.0	0.0	0.0	0.0	0.0	
			DIESEL	0.0	7.0	12.8	0.0	8.5	22.0	0.0	2.0	36.8	25.5	7.4	0.0	
	29027H000	FORWARD SPT CO, MAINT BN	MOGAS	0.0	0.0	8.9	31.2	0.0	48.2	0.0	0.0	0.0	0.0	0.0	0.0	3391.8
			DIESEL	0.0	0.0	18.9	0.0	8.5	12.5	0.0	2.0	36.8	25.5	7.8	0.0	
			MOGAS	0.0	0.0	8.5	22.8	0.0	29.5	0.0	0.0	0.0	0.0	0.0	0.0	
			DIESEL	0.0	70.0	30.6	0.0	77.6	18.3	0.0	0.0	0.0	0.0	25.3	0.0	
	29065H000	S&T BN, INF DIV (MECH)	MOGAS	0.0	0.0	82.8	147.0	4.0	132.1	0.0	0.0	0.0	0.0	0.0	0.0	3391.8
			DIESEL	0.0	0.0	127.7	0.0	53.6	38.5	0.0	8.0	147.0	102.2	50.3	0.0	
			MOGAS	0.0	0.0	8.2	12.5	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	
			DIESEL	0.0	0.0	21.6	0.0	19.6	0.0	0.0	0.0	0.0	0.0	7.9	0.0	
	29256H900	HH & LT MAINT CO MAINT BN	MOGAS	0.0	0.0	8.2	12.5	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	3391.8
			DIESEL	0.0	0.0	21.6	0.0	19.6	0.0	0.0	0.0	0.0	0.0	7.9	0.0	
			MOGAS	0.0	0.0	8.2	12.5	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	
			DIESEL	0.0	0.0	21.6	0.0	19.6	0.0	0.0	0.0	0.0	0.0	7.9	0.0	

[illegible]

**SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
SEP INF BDE M WM4T6 1005 (SRC 37100H020)**

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
05127H020	ENGR CO, SEP ARMED BDE,MAT	MOGAS	0.0	0.5	4.2	11.2	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0	
		DIESEL	43.2	37.1	0.6	0.0	8.5	7.0	0.0	35.5	0.0	381.8	309.5	10.8		0.0
06367H000	FA BTRY, FA BN, 155MM, SP	MOGAS	0.0	0.0	0.8	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	79.4	105.5	1.7	1.7		0.0
06369H000	SVC BTRY, FA BN, 155MM SP	MOGAS	0.0	0.0	1.7	5.8	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	438.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	4.4	25.0	28.6	4.9	0.0		0.0
06375H020	FA BN, 155 SP, SEP 1 (M)	MOGAS	0.0	0.0	23.8	23.8	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0		0.0
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	53.0	314.8	398.5	14.0	7.9		0.0
06376H020	HHB, FA BN, 155MM SP	MOGAS	0.0	0.0	19.6	7.2	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	6.0	51.6	53.4	3.8	2.8		0.0
08147H000	MED CO, SEP AIM BDE, ACR	MOGAS	0.0	0.0	10.4	11.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.1	0.0		0.0
12147H600	ADMIN CO, SEP BDE	MOGAS	0.0	0.0	2.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0	
		DIESEL	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0		0.0
17307H700	AR CAV TP, AR CV SQ, AM D	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	408.9	304.1	0.4	0.0		0.0
29075H020	SPT BN, SEP INF BDE (MECH)	MOGAS	0.0	0.0	34.9	73.1	0.0	70.8	0.2	0.0	0.0	0.0	0.1	0.0	438.0	
		DIESEL	0.0	35.0	71.6	0.0	32.4	12.0	0.0	2.0	36.8	25.5	25.2	0.0		0.0
29076H000	HHB, SPT BN, SEP AIM BDE	MOGAS	0.0	0.0	3.9	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.0		0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0		0.0
29077H000	S&T CO, SPT BN, SEP AIM B	MOGAS	0.0	0.0	3.4	7.6	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	438.0	
		DIESEL	0.0	28.0	12.0	0.0	22.6	0.0	0.0	0.0	0.0	0.0	9.5	0.0		0.0
29079H020	MNT CO,SPT BN,SEP INF(M)	MOGAS	0.0	0.0	18.1	43.2	0.0	36.3	0.2	0.0	0.0	0.0	0.0	0.0		0.0
		DIESEL	0.0	7.0	26.6	0.0	9.8	7.0	0.0	2.0	36.8	25.5	8.9	0.0		0.0
29176H910	HHB,SPT BN,SEP AIM/ABN/LI	MOGAS	0.0	0.0	0.8	7.1	0.0	5.0	0.0	0.0	0.0	0.0	0.1	0.0	438.0	
		DIESEL	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0		0.0
34114H120	MI CO (CEW)ACR/SEP HV BD	MOGAS	0.0	0.0	34.1	13.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0		0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	11.2	89.9	94.4	4.1	0.2		0.2
37100H020	SEP INF BDE M WMAT6,1005	MOGAS	0.0	0.5	133.8	132.3	0.0	138.8	0.2	0.0	0.0	0.0	0.3	0.0	889.4	
		DIESEL	43.2	72.1	78.8	0.0	40.9	29.0	0.0	140.1	1283.8	1185.5	60.9	8.1		0.0
37102H000	HHB, SEP INF BDE (MECH)	MOGAS	0.0	0.0	36.7	11.2	0.0	9.4	0.0	0.0	0.0	0.0	0.1	0.0		0.0
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	6.0	51.6	53.4	6.3	0.0		0.0
		JP4													451.4	

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
AIRBORNE DIVISION E/W TOW (SRC 57000L000)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
01070L000	AVIATION BRIGADE	MOGAS	0.0	0.0	65.2	55.2	0.0	34.6	0.0	0.0	0.0	0.0	2.3	0.0	11767.7
		DIESEL	0.0	32.0	2.3	0.0	7.8	0.0	0.0	0.0	0.0	0.0	16.7	0.0	
		JP4													
01072L000	HHC, AVIATION BRIGADE	MOGAS	0.0	0.0	9.0	3.6	0.0	17.6	0.0	0.0	0.0	0.0	0.1	0.0	478.8
		DIESEL	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	6.6	0.0	
		JP4													
01075L000	AIR RECON SQUADRON (AH-1)	MOGAS	0.0	0.0	20.4	12.6	0.0	6.0	0.0	0.0	0.0	0.0	2.1	0.0	3609.2
		DIESEL	0.0	8.0	2.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	4.7	0.0	
		JP4													
01076L000	HHT, AIR RECON SQUADRON	MOGAS	0.0	0.0	17.7	12.6	0.0	6.0	0.0	0.0	0.0	0.0	0.2	0.0	1415.0
		DIESEL	0.0	8.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	3.7	0.0	
		JP4													
01078L000	AIR RECON TRP, RECON SQDN	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	731.4
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	
		JP4													
01277L000	ASSAULT HEL CO (UH-60)	MOGAS	0.0	0.0	9.4	13.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	2130.0
		DIESEL	0.0	8.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.1	0.0	
		JP4													
01375L000	ATTACK HEL BN (AH-1)	MOGAS	0.0	0.0	16.9	13.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3419.7
		DIESEL	0.0	8.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	3.1	0.0	
		JP4													
01376L000	HQ AND SVC CO (AH-1)	MOGAS	0.0	0.0	15.3	13.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	357.9
		DIESEL	0.0	8.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	2.3	0.0	
		JP4													
01377L000	ATK HEL CO (AH-1)	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1020.6
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	
		JP4													
01973L000	AMC, ABN DIV (AOE)	MOGAS	0.0	0.0	4.2	20.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	308.0
		DIESEL	0.0	8.0	25.5	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4.4	0.0	
		JP4													
03023L000	CHEM CO (SMK/DECON)	MOGAS	0.0	0.0	109.1	4.0	0.0	33.5	0.0	0.0	0.0	0.0	0.9	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	
		JP4													
05025L000	ENGR BN, ABN DIV	MOGAS	0.0	0.0	5.0	4.0	0.7	45.4	0.0	0.0	0.0	0.0	8.3	0.0	
		DIESEL	0.0	73.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	
		JP4													
05026L000	HHC, ENGR BN, ABN DIV	MOGAS	0.0	0.0	5.0	4.0	0.7	18.4	0.0	0.0	0.0	0.0	2.2	0.0	
		DIESEL	0.0	73.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	
		JP4													
05027L000	ENGR CO, ENGR BN, ABN DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	2.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	
		JP4													
06200L000	AIRBORNE DIV ARTILLERY-AOE	MOGAS	0.0	0.0	77.2	17.4	0.0	26.8	0.0	0.0	0.0	0.0	5.3	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0	
		JP4													
06202L000	HHB, DIVARTY AIRBORNE	MOGAS	0.0	0.0	14.7	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.7	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	
		JP4													

	SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
06205L000	FA BN, 105MM T (ABN) AOE	MOGAS	0.0	0.0	20.8	5.8	0.0	8.4	0.0	0.0	0.0	0.0	0.0	1.5	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	
		MOGAS	0.0	0.0	12.7	5.8	0.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	
06206L000	HHS FA BATTALION	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0		
		MOGAS	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	
06207L000	FA BATTERY 105MM T	MOGAS	0.0	0.0	5.0	7.6	0.0	5.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	
		MOGAS	0.0	0.0	4.4	7.6	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	
07035L000	INF BN (ABN)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
07036L000	HHC INF BN (ABN)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
07037L000	RIFLE CO (ABN)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
07038L000	ANTARMOR COMPANY	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
07109L000	LRS DET REC SON (DLIGHT)	MOGAS	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
08065L000	MEDICAL BATTALION AIRBORNE	MOGAS	0.0	0.0	8.4	16.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	10.6	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.8	0.0	
		MOGAS	0.0	0.0	5.9	5.4	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
08066L000	HQS & CO A, MED BN (ABN)	MOGAS	0.0	0.0	3.9	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0													

[illegible]

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
SEP ABN BDE W 1005 ADPE (SRC 57100H00)

SRC	UNIT NAME	FUEL TYPE	AB	CE	CN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
05137200	ENGR CO, SEP ABN BDE	MOGAS	0.0	3.0	3.4	7.6	0.0	16.0	0.0	0.0	0.0	0.0	1.6	0.0		
		DIESEL	0.0	22.4	0.0	0.0	0.0	0.0	0.0	2.8	24.7	18.5	2.7	0.0		
		MOGAS	0.0	0.0	22.7	12.6	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0		
06205H320	FA BN, 105 T, SEP ABN BDE	DIESEL	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	6.2	0.0		
		MOGAS	0.0	0.0	22.7	12.6	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0		0.0
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0		0.0
06206H320	HHS BTRY 105MM T SEP ABN BDE	MOGAS	0.0	0.0	22.7	12.6	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.4		0.0
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
06207H300	FA BTRY, FA BN, 105MM TOW	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6		0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
08167H000	MEDICAL CO, SEP ABN BDE	MOGAS	0.0	0.0	10.4	11.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0		0.0
		MOGAS	0.0	0.0	2.2	3.6	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0		0.0
12147H600	ADMIN CO, SEP BDE	DIESEL	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	
		MOGAS	0.0	0.0	1.9	7.6	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	
17117H000	CAV TP LT INF/ABN BDE	MOGAS	0.0	0.0	41.0	61.1	0.0	72.5	0.0	0.0	0.0	0.0	0.1	0.0		
		DIESEL	0.0	0.0	58.2	0.0	47.9	0.0	7.0	0.0	0.0	0.0	0.0	12.5		0.0
		MOGAS	0.0	0.0	2.8	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1		0.0
29105H000	SPT BN, SEP ABN BDE	DIESEL	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29106H000	HHD, SPT BN, SEP ABN BDE	MOGAS	0.0	6.0	5.0	11.1	0.0	22.9	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	7.0	13.5	0.0	38.1	0.0	0.0	0.0	0.0	0.0	0.0	3.2		0.0
		MOGAS	0.0	0.0	22.5	27.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0		0.0
29109H000	MNT CO, SPT BN, SEP ABN BDE	DIESEL	0.0	0.0	11.7	0.0	9.8	7.0	0.0	0.0	0.0	0.0	3.6	0.0		
		MOGAS	0.0	0.0	0.8	7.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.1		0.0
		DIESEL	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4		0.0
29176H910	HHG, SPT BN, SEP AIM/ABN/LI	MOGAS	0.0	9.0	86.3	94.3	0.0	112.6	0.0	0.0	0.0	0.0	1.9	0.0		
		DIESEL	0.0	37.4	61.2	0.0	47.9	12.0	0.0	2.8	24.7	18.5	28.7	0.0		
		JP4														
57100H000	SEP ABN BDE W 1005 ADPE	MOGAS	0.0	0.0	17.4	5.4	0.0	9.1	0.0	0.0	0.0	0.0	0.1	0.0		
		DIESEL	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0		
		JP4														
57102H000	HHC, SEP AIRBORNE BRIGADE	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
		JP4														
318.0																
318.0																

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY

AIR ASSAULT DIVISION (SRC 67000L000)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
01200L000	COMBAT AVIATION BRIGADE	MOGAS	0.0	0.0	155.7	204.8	0.0	131.4	12.0	0.0	0.0	0.0	10.3	10.4	46013.1
		DIESEL	0.0	96.0	0.0	0.0	23.4	0.0	0.0	0.0	0.0	0.0	88.9	0.0	
		JP4													
01202L000	HHG, COMBAT AVIATION BDE	MOGAS	0.0	0.0	7.3	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	6426.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	
		MOGAS	0.0	0.0	16.5	25.2	0.0	13.3	0.0	0.0	0.0	0.0	1.6	0.0	
		DIESEL	0.0	16.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.8	0.0	
01206L000	HHG, COMBAT AVN BN (UH-60)	JP4													36.0
		MOGAS	0.0	0.0	14.9	25.2	0.0	13.3	0.0	0.0	0.0	0.0	0.8	0.0	
		DIESEL	0.0	16.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.8	0.0	
		JP4													
01207L000	COMBAT AVIATION CO (UH-60)	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	2130.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
01215L000	COMMAND AVIATION BATTALION	MOGAS	0.0	0.0	20.5	25.2	0.0	15.8	0.0	0.0	0.0	0.0	0.7	0.0	3685.5
		DIESEL	0.0	16.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.1	0.0	
		JP4													
01216L000	HHG, COMMAND AVIATION BN	MOGAS	0.0	0.0	18.9	25.2	0.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0	1590.0
		DIESEL	0.0	16.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.1	0.0	
		MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01217L000	COMMAND AVIATION CO (UH-1)	JP4													505.5
		MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
01218L000	COMMAND AVIATION CO (OH-58)	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	16119.2
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
01245L100	COMBAT AVIATION BN (CH-47)	MOGAS	0.0	0.0	29.0	48.4	0.0	39.9	12.0	0.0	0.0	0.0	1.7	10.4	8059.6
		DIESEL	0.0	16.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	15.8	0.0	
		JP4													
01246L000	HHG, COMBAT AVN BN (CH-47)	MOGAS	0.0	0.0	7.3	3.6	0.0	2.0	0.0	0.0	0.0	0.0	0.6	0.0	4208.8
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	
		MOGAS	0.0	0.0	10.8	22.4	0.0	18.9	6.0	0.0	0.0	0.0	0.5	5.2	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	7.2	0.0	
01265L100	AIR RECON SQUADRON (AH-1)	JP4													1432.0
		MOGAS	0.0	0.0	21.0	25.2	0.0	14.3	0.0	0.0	0.0	0.0	1.4	0.0	
		DIESEL	0.0	16.0	2.3	0.0	2.6	0.0	0.0	0.0	0.0	0.0	13.3	0.0	
		JP4													
01266L100	HHT, AIR RECON SQUADRON	MOGAS	0.0	0.0	18.9	25.2	0.0	14.3	0.0	0.0	0.0	0.0	0.9	0.0	694.2
		DIESEL	0.0	16.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	12.3	0.0	
		JP4													
01267L100	AIR RECON TRP, RECON SQDN	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	694.2
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
		JP4													

AIR ASSAULT DIVISION (SRC 67000L000)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV	
01385L100	ATTACK HEL BN (AH-1)	MOGAS	0.0	0.0	16.5	20.2	0.0	12.0	0.0	0.0	0.0	0.0	1.2	0.0	3339.1	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	10.5	0.0		
		JP4														
01386L100	HQ AND SVC CO (AH-1)	MOGAS	0.0	0.0	16.5	20.2	0.0	12.0	0.0	0.0	0.0	0.0	0.8	0.0	351.7	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	10.0	0.0		
		JP4														
01387L100	ATK HEL CO (AH-1)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	995.8	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0		
		JP4														
01925L000	AVIATION MAINT BN AAD	MOGAS	0.0	0.0	28.3	23.6	6.0	10.3	0.0	0.0	0.0	0.0	0.0	5.2	568.0	
		DIESEL	0.0	16.0	63.0	0.0	53.6	0.0	0.0	0.0	0.0	0.0	0.0	7.2		0.0
		JP4														
01926L000	HHSC, AVN MAINT BN, AAD	MOGAS	0.0	0.0	2.2	3.6	2.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7		0.0
		JP4														
01927L000	AVN MAINT CO, AMBASIT DIV	MOGAS	0.0	0.0	13.0	10.0	2.0	2.9	0.0	0.0	0.0	0.0	0.0	2.6	995.8	
		DIESEL	0.0	8.0	31.5	0.0	18.3	0.0	0.0	0.0	0.0	0.0	0.0	2.7		0.0
		JP4														
03057L000	CHEM CO (SMK/DECON)	MOGAS	0.0	0.0	109.1	4.0	0.0	33.5	0.0	0.0	0.0	0.0	0.9	0.0	568.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8		0.0
		JP4														
05215L000	ENGINEER BN AIR ASLT	MOGAS	0.0	0.0	3.4	4.0	0.0	45.4	0.0	0.0	0.0	0.0	8.2	0.0	284.0	
		DIESEL	0.0	96.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1		0.0
		JP4														
05216L000	HHG, ENGR BN AIR ASLT	MOGAS	0.0	0.0	3.4	4.0	0.0	18.4	0.0	0.0	0.0	0.0	2.1	0.0	284.0	
		DIESEL	0.0	96.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1		0.0
		JP4														
05217L000	ENGR CO ENGR BN AASLT	MOGAS	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	2.0	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3		0.0
		JP4														
06700L000	DIV ARTILLERY,AIR ASLT-AD	MOGAS	0.0	0.0	62.1	17.4	0.0	26.8	0.0	0.0	0.0	0.0	5.2	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.9		0.0
		JP4														
06702L000	HHB,DIV ARTY,AIR ASSAULT	MOGAS	0.0	0.0	14.2	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.6	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0		
		JP4														
06705L000	FA BN, 105MM T,AIR ASLT-A	MOGAS	0.0	0.0	16.0	5.8	0.0	8.4	0.0	0.0	0.0	0.0	1.5	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.0		
		JP4														
06706L000	HHS FA BATTALION	MOGAS	0.0	0.0	11.1	5.8	0.0	8.4	0.0	0.0	0.0	0.0	1.4	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0		
		JP4														
06707L000	FA BATTERY 105MM T	MOGAS	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0		
		JP4														
07055L000	INF BN (AASLT)	MOGAS	0.0	0.0	4.7	7.6	0.0	5.4	0.0	0.0	0.0	0.0	4.5	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0		
		JP4														
07056L000	HHG INF BN (AASLT)	MOGAS	0.0	0.0	4.1	7.6	0.0	5.4	0.0	0.0	0.0	0.0	1.3	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0		
		JP4														
07057L000	RIFLE CO (AASLT)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	284.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		JP4														

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SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OY	AV		
4256BL000	AUG-GRREG SECTION	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	2272.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		0.0	
		MOGAS	0.0	0.0	37.7	52.0	0.0	91.0	0.9	0.0	0.0	0.0	0.0	0.3		0.0	
4306SL000	MAINT BN ASSLT	DIESEL	0.0	0.0	90.8	0.0	45.1	77.0	0.0	0.0	0.0	0.0	20.1	0.0			
		MOGAS	0.0	0.0	11.1	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.1		0.0	
		DIESEL	0.0	0.0	46.1	0.0	19.6	0.0	0.0	0.0	0.0	0.0	0.0	7.2		0.0	
43067L000	FWD SPT CO MT BN ASSLT	MOGAS	0.0	0.0	6.8	8.0	0.0	17.9	0.0	0.0	0.0	0.0	0.0	0.0		52772.9	
		DIESEL	0.0	0.0	10.1	0.0	8.5	15.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0		
		MOGAS	0.0	0.0	6.2	24.0	0.0	36.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0		
43068L000	HEAVY MAINT CO, MAINT BN	DIESEL	0.0	0.0	14.3	0.0	0.0	32.0	0.0	0.0	0.0	0.0	3.2	0.0			
		MOGAS	0.0	0.0	35.5	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	4.3	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0		
44145L000	ADA BN (AIR ASSAULT DIV)	MOGAS	0.0	0.0	19.1	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.2	0.0	2272.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4		0.0	
		MOGAS	0.0	0.0	5.5	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0		0.0	
44147L000	ADA BTRY VULMPDS (ASLT)	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0			
		MOGAS	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8		0.0	
55168L000	TMT CO S&T BN AASLT DIV	MOGAS	0.0	0.0	121.3	170.8	6.0	187.4	0.9	0.0	0.0	0.0	1.7	5.2		2272.0	
		DIESEL	0.0	0.0	202.0	0.0	333.3	81.0	0.0	0.0	0.0	0.0	0.0	59.6	0.0		
		JP4															
63042L000	HHC/MMC,SPTCMD,AASLT DIV	MOGAS	0.0	0.0	7.2	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.2	0.0	2272.0		
		DIESEL	0.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0			0.0
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
63542LA00	AUG - DIV MAINT	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			52772.9
		MOGAS	0.0	0.0	751.7	508.6	6.0	529.3	12.9	0.0	0.0	0.0	0.0	76.9		15.6	
		DIESEL	0.0	239.9	204.9	0.0	359.3	92.0	0.0	0.0	0.0	0.0	0.0	266.2		0.3	
67000L000	AIR ASSAULT DIVISION	JP4														52772.9	
		MOGAS	0.0	0.0	24.5	3.6	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.8	0.0		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0		
67004L000	HHC AIR ASSAULT DIVISION	MOGAS	0.0	0.0	7.3	1.8	0.0	3.0	0.0	0.0	0.0	0.0	0.4	0.0	52772.9		
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0			0.0
		JP4															
67042L000	HHC AIR ASSAULT BRIGADE	MOGAS	0.0	0.0	24.5	3.6	0.0	11.5	0.0	0.0	0.0	0.0	0.8	0.0			52772.9
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7		0.0	
		JP4															

**SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
LIGHT INFANTRY DIVISION (SRC 77000L000)**

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
01100L000	COMBAT AVN BDE (ID(L))	MOGAS	0.0	0.0	52.1	96.0	4.0	34.1	0.0	0.0	0.0	0.0	7.9	0.0	10169.7
		DIESEL	0.0	0.0	3.4	0.0	5.2	4.0	0.0	0.0	0.0	0.0	13.1	0.0	
		JP4													
		MOGAS	0.0	0.0	5.9	7.6	2.0	16.1	0.0	0.0	0.0	0.0	1.3	0.0	
01102L000	HQ & HQ COMPANY, CAB (ID(L))	DIESEL	0.0	0.0	1.1	0.0	1.3	0.0	0.0	0.0	0.0	0.0	7.4	0.0	202.2
		JP4													
		MOGAS	0.0	0.0	10.5	22.0	0.0	3.0	0.0	0.0	0.0	0.0	0.8	0.0	
		DIESEL	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
01103L200	COMBAT AVN CO (UH-1)	JP4													2438.0
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
01167L000	AIR CAV TRP, CAV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	694.2
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
		MOGAS	0.0	0.0	14.2	22.0	2.0	3.0	0.0	0.0	0.0	0.0	1.3	0.0	
01185L100	ATTACK HEL BN (ID(L))	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	3339.1
		JP4													
		MOGAS	0.0	0.0	14.2	22.0	2.0	3.0	0.0	0.0	0.0	0.0	1.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	
011886L100	HQ AND SVC CO	JP4													351.7
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
01187L100	ATK HEL CO	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	995.8
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
		MOGAS	0.0	0.0	10.7	19.0	0.0	2.4	6.0	0.0	0.0	0.0	1.0	0.0	
01977L000	TRANS ACFT MNT CO LT INF	DIESEL	0.0	0.0	19.5	0.0	1.3	0.0	0.0	0.0	0.0	0.0	3.6	0.0	212.0
		JP4													
		MOGAS	0.0	0.0	3.1	0.0	0.0	24.9	0.0	0.0	0.0	0.0	6.5	0.0	
		DIESEL	0.0	0.0	99.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	
05155L000	ENGINEER BN (ID(L))	MOGAS	0.0	0.0	0.0	0.0	0.0	18.9	0.0	0.0	0.0	0.0	6.0	0.0	0.0
		DIESEL	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.2	0.0	
05156L000	HHC ENGR BN (ID(L))	DIESEL	0.0	0.0	99.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
05157L000	ENGR CO ENGR BN (ID(L))	JP4													0.0
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
06100L000	DIVISION ARTILLERY, ID(L)	MOGAS	0.0	0.0	71.8	22.8	0.0	26.3	0.0	0.0	0.0	0.0	2.9	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.8	0.0	
		JP4													
		MOGAS	0.0	0.0	13.6	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.8	0.0	
06102L000	HHB DIV ARTY, ID(L)	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
		JP4													
		MOGAS	0.0	0.0	19.4	7.6	0.0	8.4	0.0	0.0	0.0	0.0	0.7	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	
06125L000	FA BN, 105MM T, ID(L)	MOGAS	0.0	0.0	9.5	7.6	0.0	8.4	0.0	0.0	0.0	0.0	0.5	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	
		JP4													
		MOGAS	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
06126L000	HHS DS BATTALION	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	
		DIESEL	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	
06127L000	FA BATTERY 105MM T	JP4													0.0
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
07015L000	INFANTRY BATTALION (ID(L))	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
LIGHT INFANTRY DIVISION (SRC 77000L000)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
07016L000	HHC INFANTRY BN (LIGHT)	MOGAS	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	
07017L000	RIFLE CO INF BN (LIGHT)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
07109L000	LRS DET REC SQD (IDL)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
08045L000	MED BN LT INF DIV	MOGAS	0.0	0.0	25.9	0.0	0.0	1.0	0.0	0.0	0.0	0.0	4.7	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	
08046L000	HQS & SPT CO	MOGAS	0.0	0.0	9.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.6	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	
08047L000	FORWARD SPT MEDICAL CO	MOGAS	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	
11045L000	SIG BN (IDL)	MOGAS	0.0	0.0	86.9	0.0	0.0	3.9	0.0	0.0	0.0	0.0	6.9	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	
11046L000	HHC, SIG BN (IDL)	MOGAS	0.0	0.0	7.5	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.7	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	
11047L000	CMD COMM CO	MOGAS	0.0	0.0	38.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	2.9	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	
11048L000	SIG SPT CO	MOGAS	0.0	0.0	41.4	0.0	0.0	1.0	0.0	0.0	0.0	0.0	3.3	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	
12113L000	DIVISION BAND	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17185L000	RECON SQDN, (IDL)	MOGAS	0.0	0.0	11.1	22.4	0.0	9.0	0.0	0.0	0.0	0.0	3.6	0.0	
		DIESEL	0.0	0.0	2.3	0.0	1.3	4.0	0.0	0.0	0.0	0.0	3.0	0.0	
17186L000	HHT RECON SQDN (IDL)	MOGAS	0.0	0.0	11.1	22.4	0.0	9.0	0.0	0.0	0.0	0.0	1.4	0.0	
		DIESEL	0.0	0.0	0.0	0.0	1.3	4.0	0.0	0.0	0.0	0.0	2.8	0.0	
17187L000	CAV TRP (IDL)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19323L000	MP COMPANY (IDL)	MOGAS	0.0	0.0	4.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.1	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	
34295L000	MI BN (CEMN) (IDL)	MOGAS	0.0	0.0	23.8	0.0	0.0	5.3	0.0	0.0	0.0	0.0	2.3	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	
34296L000	HQ,HQS&SVC CO MI BN LIGHT	MOGAS	0.0	0.0	13.7	0.0	0.0	5.3	0.0	0.0	0.0	0.0	1.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	
34297L000	COLL CO MI BN LT DIV	MOGAS	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
34298L000	INTEL&SURVCL CO MI BN LT	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

42025L000	S&T BN ID(U)	MOGAS	0.0	0.0	7.6	3.84	0.0	49.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
		DIESEL	0.0	0.0	18.6	0.0	191.5	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5	0.0
42026L000	HQ & SUP CO S&T BN ID(U)	MOGAS	0.0	0.0	1.7	11.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
		DIESEL	0.0	0.0	18.0	0.0	5.2	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0
42027L000	GWD SUP CO S&T BN ID(U)	MOGAS	0.0	0.0	0.8	3.6	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
		DIESEL	0.0	0.0	0.0	0.0	62.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
42526LA00	AUG-CEB SECTION	MOGAS	0.0	0.0	3.4	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0
42526LB00	AUG-GRREG SECTION	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
43045L000	MAINT BN ID(U)	MOGAS	0.0	0.0	36.0	48.0	0.0	65.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
		DIESEL	0.0	0.0	10.6	0.0	3.9	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.7	0.0
43046L000	HQ + LT MT CO ID(U)	MOGAS	0.0	0.0	16.2	16.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
		DIESEL	0.0	0.0	8.3	0.0	3.9	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0
43048L000	MAIN SPT CO ID(U)	MOGAS	0.0	0.0	19.8	32.0	0.0	64.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
		DIESEL	0.0	0.0	2.3	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0
44115L000	ADA BN, ID(U)	MOGAS	0.0	0.0	34.5	4.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0
44116L000	HHB ADA BN ID(U)	MOGAS	0.0	0.0	8.8	4.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0
44117L000	ADA GUN/STGR BTRY ID(U)	MOGAS	0.0	0.0	12.8	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
55178L000	TMT CO S&T BN ID(U)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.0
63021L000	SPT CMD, ID(U)	MOGAS	0.0	0.0	84.4	107.2	0.0	120.1	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	0.0
		DIESEL	0.0	0.0	70.2	0.0	196.7	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.7	0.0
212.0																		
63022L000	HHC/MNC,SPT CMD, ID(U)	MOGAS	0.0	0.0	4.2	1.8	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0
		DIESEL	0.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
63522LA00	AUG-DIVISION MAIT	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77000L000	LIGHT INFANTRY DIVISION	MOGAS	0.0	0.0	412.7	255.2	4.0	266.1	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.1	0.0
		DIESEL	0.0	99.2	73.6	0.0	201.9	79.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	106.1	0.0
10381.7																		
77004L000	HHC LIGHT INFANTRY DIVISION	MOGAS	0.0	0.0	12.1	3.6	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0
77042L000	HHC INF DIV BDE ID(U)	MOGAS	0.0	0.0	7.5	7.2	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0

Table 2-15. Class III Bulk Planning Factors — (Cont'd)

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
SEP LT INF BDE W1005 ADPE (SRC 77100H000)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
05207H000	ENGR CO, SEP LT INF BDE	MOGAS	0.0	0.5	4.2	9.4	0.0	21.0	0.0	0.0	0.0	0.0	0.9	0.0	637.2
		DIESEL	0.0	32.5	0.6	0.0	1.3	7.0	0.0	8.5	74.1	55.6	6.5	0.0	
06115H000	FA BN, 105MM T, LT INF BDE	MOGAS	0.0	0.0	24.1	16.6	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	11.8	0.0	
06116H000	HH&S BTRY, FA BN, 105MM	MOGAS	0.0	0.0	21.5	11.2	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	6.5	0.0	637.2
06117H000	FA BTRY, 105MM TOWED	MOGAS	0.0	0.0	0.8	1.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	
08197H000	MEDICAL CO, SEP LT INF BDE	MOGAS	0.0	0.0	10.4	11.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	
12147H600	ADMIN CO, SEP BDE	MOGAS	0.0	0.0	2.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	637.2
		DIESEL	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	
17117H000	CAV TP LT INF/ABN BDE	MOGAS	0.0	0.0	1.9	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	
29176H910	HHG,SPT BN,SEP AM/ABN/IDL	MOGAS	0.0	0.0	0.8	7.1	0.0	5.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	637.2
29245H000	SUPPORT BN, SEP LT INF BDE	MOGAS	0.0	0.0	30.6	51.8	0.0	53.0	5.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	50.4	0.0	26.8	7.0	0.0	2.2	12.5	14.3	10.6	0.0	
29246H000	HQ AND HQ DET, SUPPORT BN	MOGAS	0.0	0.0	4.2	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	
29247H000	MNT&SUP CO, SPT BN	MOGAS	0.0	0.0	17.1	29.4	0.0	32.0	5.0	0.0	0.0	0.0	0.0	0.0	637.2
		DIESEL	0.0	0.0	17.4	0.0	26.8	7.0	0.0	2.2	12.5	14.3	4.9	0.0	
77100H000	SEP LT INF BDE W1005 ADPE	MOGAS	0.0	0.5	103.4	96.5	0.0	109.2	5.0	0.0	0.0	0.0	1.2	0.0	
		DIESEL	0.0	40.5	57.5	0.0	28.1	19.0	0.0	10.7	86.6	69.9	37.4	0.0	
77102H000	HHG, SEP LT INF BRIGADE	MOGAS	0.0	0.0	42.7	11.2	0.0	9.1	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	8.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	637.2

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVY DIV AR 6TK M60 4M M113 (SRC 87000J210)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
01285J210	CBT SPT AVN BN (HVY DIV)	MOGAS	0.0	0.0	46.1	37.6	1.5	21.3	0.0	0.0	0.0	0.0	0.0	0.0	1872.8
		DIESEL	0.0	22.0	45.8	0.0	8.5	19.0	0.0	0.0	0.0	0.0	14.0	0.0	
01286J210	HHG, CBT SPT AVN BN (HVY)	MOGAS	0.0	0.0	7.5	12.6	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.0	0.0	
01287J200	GEN SPT AVN CO	MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	5.3	0.0	1540.8

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVY DIV AR 6TK M60 4M M113 (SRC 87000J210) —Cont'd

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
07248J200	ANTIARMOR CO INF BKNM) IT	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	16.0	137.6	142.4	0.4	0.0	
08205J200	MEDICAL BN HVY DIV	MOGAS	0.0	0.0	46.7	28.6	0.0	52.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	11.1	0.0	0.0	20.0	0.0	15.0	129.0	133.5	14.3	0.0	
08206J200	HHD MED BN HVY DIV	MOGAS	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	
08207J200	MED CO MED BN HVY DIV	MOGAS	0.0	0.0	10.4	5.8	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	5.0	43.0	44.5	2.8	0.0	
08208J200	MED SPT CO MED BN HVY DIV	MOGAS	0.0	0.0	13.7	11.2	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.1	0.0	
09558J200	MSL SPT CO HVY DIV	MOGAS	0.0	0.0	27.6	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	56.7	0.0	1.3	4.0	0.0	2.0	36.8	25.5	7.6	0.0	
11035J200	SIGNAL BN (HEAVY DIV)	MOGAS	0.0	0.0	79.3	37.6	0.0	15.3	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	20.0	0.0	0.0	0.0	0.0	12.1	0.0	
11036J200	HHC SIG BN (HEAVY DIV)	MOGAS	0.0	0.0	13.8	4.0	0.0	3.3	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.9	0.0	
11037J200	CMD OPNS CO (HEAVY DIV)	MOGAS	0.0	0.0	27.2	13.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.1	0.0	
11038J200	FWD COMM CO HEAVY DIVISION	MOGAS	0.0	0.0	24.3	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.2	0.0	
11039J200	SIG SPT OPNS CO HEAVY DIV	MOGAS	0.0	0.0	14.0	11.2	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.8	0.0	
12217J200	AG CO- ARMOR/INF/MECH) DIV	MOGAS	0.0	0.0	2.5	11.2	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	16.5	0.0	0.0	5.0	0.0	0.0	0.0	0.0	1.9	0.0	
17185J210	ATK HEL BN CBAA AHIS HV DIV	MOGAS	0.0	0.0	15.1	19.2	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	1.1	0.0	3.9	10.0	0.0	0.0	0.0	0.0	10.1	0.0	3539.7
17186J210	HQ AND SVC CO	MOGAS	0.0	0.0	15.1	19.2	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	1.1	0.0	3.9	10.0	0.0	0.0	0.0	0.0	9.4	0.0	477.9
17187J210	ATK HEL CO	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1020.6
17201J210	CAV BDE AIR ATK (CBAA)AH	MOGAS	0.0	0.0	103.8	109.2	1.5	75.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	46.0	49.8	0.0	18.9	59.0	0.0	89.0	1067.6	668.7	50.7	0.6	10557.0
17202J200	HQ & HQ TROOP, CBAA	MOGAS	0.0	0.0	7.6	4.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	
17205J210	CAV SQDN, CBAA AHIS HV DIV	MOGAS	0.0	0.0	20.0	29.2	0.0	23.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	1.1	0.0	2.6	20.0	0.0	89.0	1067.6	668.7	13.7	0.6	1604.8

172061210	HQ AND HQ TRP, CAV SQDN	MOGAS DIESEL	0.0 0.0	0.0 8.0	20.0 1.1	29.2 0.0	0.0 2.6	21.4 20.0	0.0 0.0	0.0 21.8	0.0 238.5	0.0 201.8	0.0 12.5	0.0 0.6	142.0
172071210	CAV TRP, CAV SQDN	JP4 MOGAS DIESEL	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	1.0 0.0 0.0	0.0 0.0 0.0	0.0 33.6 0.0	0.0 414.6 0.0	0.0 233.4 0.0	0.0 0.3 0.0	0.0 0.0 0.0		
172081210	AIR CAV TRP, CAV SQDN	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.2 0.0		
172351210	TANK BATTALION, EDW, M60	JP4 MOGAS DIESEL	0.0 0.0 0.0	0.0 0.0 0.0	5.5 0.6 0.0	36.2 0.0 0.0	0.0 0.0 0.0	29.8 7.0 0.0	0.0 0.0 0.0	0.0 51.4 0.0	0.0 619.0 0.0	0.0 490.5 0.0	0.0 12.9 0.0	0.0 0.0 0.0	
172361110	HHC, TK BN, M60	MOGAS DIESEL	0.0 0.0	0.0 0.0	5.5 0.6	36.2 0.0	0.0 0.0	29.8 7.0	0.0 0.0	0.0 51.4	0.0 619.0	0.0 490.5	0.0 11.8	0.0 0.0	731.4
172371110	TK CO, TK BN, M60	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.3	0.0 0.0	
192171200	MP CO-HVY DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	3.2 1.1	4.0 0.0	0.0 0.0	0 5.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 2.3	0.0 0.0	
342851200	MI BN (CEW) HVY DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	63.4 16.5	18.8 0.0	0.0 0.0	17.5 17.0	0.0 0.0	0.0 11.4	0.0 85.2	0.0 90.9	0.0 13.4	0.0 0.4	
342861200	HQ HQ-OP CO MI BN CEWI DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	13.1 1.5	0.0 0.0	0.0 0.0	0.0 12.0	0.0 0.0	0.0 1.0	0.0 8.6	0.0 8.9	0.0 3.1	0.0 0.0	
342871200	EW CO MI BN CEWI, DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	15.2 15.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 1.3	0.0 0.4	
342881200	INTL SVL CO MI BN CEWI DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 6.0	0.0 51.6	0.0 53.4	0.0 2.8	0.0 0.0	
342891200	SVC SPT CO MI BN CEWI DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	35.0 0.0	18.8 0.0	0.0 0.0	17.5 5.0	0.0 0.0	0.0 4.4	0.0 25.0	0.0 28.6	0.0 6.0	0.0 0.0	
420041200	SUP CO FWD SPT BN HVY DIV	MOGAS DIESEL	0.0 0.0	0.0 21.0	2.5 0.0	7.2 0.0	0.0 21.3	7.9 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 4.9	0.0 0.0	
420051200	S&T BN HEAVY DIVISION	MOGAS DIESEL	0.0 0.0	0.0 28.0	16.2 3.4	32.6 0.0	0.0 43.5	39.3 17.0	14.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 32.8	0.0 0.0	
420061200	HHC S&T BN HEAVY DIVISION	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.8 1.1	21.0 0.0	0.0 0.0	8.0 5.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 2.1	0.0 0.0	
420071200	S&S CO S&T BN HVY DIV	MOGAS DIESEL	0.0 0.0	0.0 28.0	13.7 0.0	0.0 0.0	0.0 43.5	25.5 0.0	14.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 10.1	0.0 0.0	
430041200	MAINT CO FWD SPT BN HVY DIV	MOGAS DIESEL	0.0 0.0	0.0 7.0	33.2 11.8	16.0 0.0	0.0 9.8	15.5 11.0	0.0 0.0	0.0 3.0	0.0 45.4	0.0 34.4	0.0 9.3	0.0 0.0	
430041201	TK SYSTEM SPT TM	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.5 0.0	0.0 0.0	0.0 0.0	5.6 0.0	0.0 0.0	0.0 1.0	0.0 8.6	0.0 8.9	0.0 0.7	0.0 0.0	
430041202	INF SYS(M) SPT TM	MOGAS DIESEL	0.0 0.0	0.0 0.0	3.5 0.0	0.0 0.0	0.0 0.0	5.6 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.8	0.0 0.0	
430051200	MAINT BN SPT COMD HVY DIV	MOGAS DIESEL	0.0 0.0	0.0 37.0	83.3 153.7	66.4 0.0	0.0 26.8	79.1 17.0	0.0 0.0	0.0 6.0	0.0 90.7	0.0 68.9	0.0 27.3	0.0 0.0	
430061200	HQ&SUPPORT CO HVY DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	7.3 5.2	7.6 0.0	0.0 17.0	4.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 6.2	0.0 0.0	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVY DIV AR 6TK M60 4M M113 (SRC 87000J210)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
43007200	LIGHT MAINT CO HVY DIV	MOGAS	0.0	0.0	32.9	25.4	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0	332.0
		DIESEL	0.0	0.0	88.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	
43008200	HEAVY MAINT CO HVY DIV	MOGAS	0.0	0.0	15.5	29.4	0.0	53.2	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	7.0	3.6	0.0	8.5	13.0	0.0	4.0	54.0	43.3	7.1	0.0	
55087200	TMT CO S&T BN HEAVY DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	332.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	13.9	0.0	
55089200	TMT CO (HY) S&T BN HY DIV	MOGAS	0.0	0.0	1.7	11.6	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.7	0.0	0.0	7.0	0.0	0.0	0.0	0.0	6.7	0.0	
55427200	TAM CO CBT SPT AVN BN CBA	MOGAS	0.0	0.0	16.7	13.0	1.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	332.0
		DIESEL	0.0	16.0	45.2	0.0	8.5	5.0	0.0	0.0	0.0	0.0	5.1	0.0	
		JP4													
63001210	SPT COMD, 6×4, HVY DIV/AR	MOGAS	0.0	0.0	282.4	216.0	0.0	308.3	14.0	0.0	0.0	0.0	0.4	0.0	
		DIESEL	0.0	149.0	272.6	0.0	163.6	92.0	0.0	40.0	441.8	394.7	132.6	0.0	332.0
63002200	HHG, SPT COMD, HV DIV	MOGAS	0.0	0.0	0.8	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	
63003200	DNMC, SPT COMD, HV DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	332.0
		DIESEL	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	
63005210	FWD SPT BN 2×1 HVY DIV	MOGAS	0.0	0.0	43.1	23.2	0.0	41.4	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	28.0	14.8	0.0	31.1	11.0	0.0	6.0	71.2	61.1	17.2	0.0	
63005220	FWD SPT BN 2×2 HVY DIV	MOGAS	0.0	0.0	46.6	23.2	0.0	47.0	0.0	0.0	0.0	0.0	0.1	0.0	332.0
		DIESEL	0.0	28.0	14.8	0.0	31.1	11.0	0.0	7.0	79.8	70.0	17.9	0.0	
63002200	HHG, FWD SPT BN, HEAVY DIV	MOGAS	0.0	0.0	2.8	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
87000210	HVY DIV/AR 6TK M60, 4M M11	MOGAS	0.0	2.0	791.6	898.6	1.5	1024.2	14.0	0.0	0.0	0.0	1.3	0.0	10557.0
		DIESEL	86.4	263.0	410.9	0.0	191.0	569.0	0.0	1421.2	13419.5	12420.2	453.6	31.7	
		JP4													
87004210	HHG ARMORED DIVISION	MOGAS	0.0	0.0	16.0	14.8	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	34.4	35.6	2.1	0.0	10557.0
87042210	HHG ARMED DIV BDE	MOGAS	0.0	0.0	5.9	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0	
87042220	HHG INF DIV (MECH) BDE	MOGAS	0.0	0.0	8.9	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0	

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVY DIV M 5TK M60 5M M113 (SRC 87000J220)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
012851210	CBT SPT AVN BN (HVY DIV)	MOGAS	0.0	0.0	46.1	37.6	1.5	21.3	0.0	0.0	0.0	0.0	0.0	0.0	1872.8
		DIESEL	0.0	22.0	45.8	0.0	8.5	19.0	0.0	0.0	0.0	0.0	13.6	0.0	
		JP4													
012861210	HHG, CBT SPT AVN BN (HVY)	MOGAS	0.0	0.0	7.5	12.6	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.2	0.0	
012871200	GEN SPT AVN CO	MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	5.3	0.0	
		JP4													
033871200	CHEMICAL CO, HVY DIV	MOGAS	0.0	0.0	36.8	4.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	6.0	51.6	53.4	9.5	0.0	
051451210	ENGR BN, HVY DIV - RIBBON	MOGAS	0.0	2.0	22.6	45.6	0.0	102.7	0.0	0.0	0.0	0.0	0.1	0.0	1540.8
		DIESEL	86.4	68.0	2.8	0.0	8.5	34.0	0.0	147.1	1583.2	1311.5	36.9	0.0	
051461200	HQ-HQ COMPANY	MOGAS	0.0	0.0	4.1	7.6	0.0	11.5	0.0	0.0	0.0	0.0	0.1	0.0	1540.8
		DIESEL	0.0	0.0	0.6	0.0	8.5	7.0	0.0	1.0	8.6	8.9	7.4	0.0	
051471200	ENGR CO, ENGR BN, HVY DIV	MOGAS	0.0	0.5	4.2	7.6	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	17.0	0.6	0.0	0.0	5.0	0.0	36.5	393.6	325.6	5.3	0.0	
051481210	BRIDGE COMPANY - RIBBON	MOGAS	0.0	0.0	1.7	7.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	86.4	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	8.2	0.0	
063001220	MECH DIVARTY W/TACFIRE	MOGAS	0.0	0.0	112.5	109.6	0.0	121.5	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	41.2	0.0	0.0	100.0	0.0	288.5	1934.4	2272.6	82.2	30.7	
063021200	HHB DIV ARTY HVY DIV	MOGAS	0.0	0.0	26.3	5.4	0.0	8.4	0.0	0.0	0.0	0.0	0.1	0.0	1540.8
		DIESEL	0.0	0.0	9.8	0.0	0.0	5.0	0.0	1.0	8.6	8.9	5.4	0.0	
063071200	TGT ACQ BTRY HVY DIV	MOGAS	0.0	0.0	4.4	5.4	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	12.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	5.0	0.0	
063651210	FA BN 155 SP HVY DIV	MOGAS	0.0	0.0	20.0	25.6	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	5.3	0.0	0.0	25.0	0.0	7.24	432.5	545.0	17.3	10.1	
063651220	FA BN 155 SP HVY DIV	MOGAS	0.0	0.0	20.0	25.6	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	5.3	0.0	0.0	25.0	0.0	7.24	432.5	545.0	17.3	10.1	
063661210	HHB FA BN 155SP HVY DIV	MOGAS	0.0	0.0	12.8	7.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	7.0	60.2	62.3	2.5	3.4	
063661220	HHB FA BN 155SP HVY DIV	MOGAS	0.0	0.0	12.8	7.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	7.0	60.2	62.3	2.4	3.4	
063671200	FA BTRY 155SP HVY DIV	MOGAS	0.0	0.0	1.1	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	19.6	111.6	146.6	2.2	2.2	
063691200	SVC BTRY 155SP HVY DIV	MOGAS	0.0	0.0	3.9	7.6	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	6.6	37.5	42.9	8.2	0.0	
063951200	FA BN, 8INMLRS HVY DIV	MOGAS	0.0	0.0	21.4	22.0	0.0	26.5	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	3.6	0.0	0.0	10.0	0.0	69.3	619.7	619.8	19.7	0.0	
063961200	HHB 8INMLRS BN HVY DIV	MOGAS	0.0	0.0	6.4	3.6	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	25.8	26.7	2.4	0.0	
063961201	AUG-FIST, MECH BN	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.0	0.3	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)**SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVV DIV M 5TK M60 5M M113 (SRC 87000J220) —Cont'd**

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
06397200	FA BTRY 8IN SP HVV DIV	MOGAS	0.0	0.0	3.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2	163.0	200.2	2.1	0.0	
06398200	FA BTRY MLRS	MOGAS	0.0	0.0	3.8	3.6	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	169.4	113.0	7.1	0.0	
06399200	SVC BTRY 8IN/MLRS HVV DIV	MOGAS	0.0	0.0	4.7	7.6	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	10.0	0.0	8.4	98.5	79.7	5.7	0.0	
07245220	INF BN-MECH E/M M113	MOGAS	0.0	0.0	4.4	23.4	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.1	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	
07246220	HHC INF BN MECH M113	MOGAS	0.0	0.0	3.9	23.4	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	20.0	0.0	44.8	384.3	393.1	5.1	0.0	
07247220	RIFLE CO INF BN MECH M113	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	16.0	137.6	142.4	0.4	0.0	
07248200	ANTIARMOR CO INF BN/M IT	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	16.0	137.6	142.4	0.4	0.0	
08205200	MEDICAL BN HVV DIV	MOGAS	0.0	0.0	46.7	28.6	0.0	52.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	11.1	0.0	0.0	20.0	0.0	15.0	129.0	133.5	14.3	0.0	
08206200	HHD MED BN HVV DIV	MOGAS	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	
08207200	MED CO MED BN HVV DIV	MOGAS	0.0	0.0	10.4	5.8	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	5.0	43.0	44.5	2.8	0.0	
08208200	MED SPT CO MED BN HVV DIV	MOGAS	0.0	0.0	13.7	11.2	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.1	0.0	
09558200	MSL SPT CO HVV DIV	MOGAS	0.0	0.0	27.6	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	30.0	56.7	0.0	1.3	4.0	0.0	2.0	36.8	25.5	7.6	0.0	
11035200	SIGNAL BN (HEAVY DIV)	MOGAS	0.0	0.0	79.3	37.6	0.0	15.3	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	20.0	0.0	0.0	0.0	0.0	12.1	0.0	
11036200	HHC SIG BN (HEAVY DIV)	MOGAS	0.0	0.0	13.8	4.0	0.0	3.3	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.9	0.0	
11037200	CMD OPS CO (HEAVY DIV)	MOGAS	0.0	0.0	27.2	13.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.1	0.0	
11038200	FWD COMM CO HEAVY DIVISION	MOGAS	0.0	0.0	24.3	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.2	0.0	
11039200	SIG SPT OPS CO HEAVY DIV	MOGAS	0.0	0.0	14.0	11.2	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.8	0.0	
12217200	AG CO - ARMOR/INF/MECH DIV	MOGAS	0.0	0.0	2.5	11.2	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	16.5	0.0	0.0	5.0	0.0	0.0	0.0	0.0	1.9	0.0	
17185210	ATK HEL BN CBAA AHHS HV DIV	MOGAS	0.0	0.0	15.1	19.2	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	1.1	0.0	3.9	10.0	0.0	0.0	0.0	0.0	10.1	0.0	

JP4

3539.7

SRC	UNIT NAME
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10557.0

87004J220	HHC INFANTRY DIVISION (MECH)	MOGAS	0.0	0.0	17.9	14.8	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	34.4	35.6	2.1	0.0				
87042J210	HHC ARMD DIV BDE	MOGAS	0.0	0.0	5.9	9.4	0.0	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0				
87042J220	HHC INF DIV (MECH) BDE	MOGAS	0.0	0.0	8.9	9.4	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0				

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY HVV DIV AR 6TK M1 4M FVS (SRC 87000J230)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
01285J210	CBT SPT AVN BN (HVV DIV)	MOGAS	0.0	0.0	46.1	37.6	1.5	21.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	22.0	45.8	0.0	8.5	19.0	0.0	0.0	0.0	0.0	13.6	0.0	
		JP4													1872.8
01286J210	HHC, CBT SPT AVN BN (HVV)	MOGAS	0.0	0.0	7.5	12.6	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0
01287J200	GEN SPT AVN CO	MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0
		JP4													1540.8
03387J200	CHEMICAL CO, HVV DIV	MOGAS	0.0	0.0	36.8	4.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	6.0	51.6	53.4	9.5	0.0	0.0
05145J210	ENGR BN, HVV DIV - RIBBON	MOGAS	0.0	2.0	22.6	45.6	0.0	102.7	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		DIESEL	86.4	68.0	2.8	0.0	8.5	34.0	0.0	147.1	1583.2	1311.5	36.9	0.0	0.0
05146J200	HQ-HQ COMPANY	MOGAS	0.0	0.0	4.1	7.6	0.0	11.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	8.5	7.0	0.0	1.0	8.6	8.9	7.4	0.0	0.0
05147J200	ENGR CO, ENGR BN, HVV DIV	MOGAS	0.0	0.5	4.2	7.6	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	17.0	0.6	0.0	0.0	5.0	0.0	36.5	393.6	325.6	5.3	0.0	0.0
05148J210	BRIDGE COMPANY - RIBBON	MOGAS	0.0	0.0	1.7	7.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	86.4	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0
06300J210	ARMD DIVARTY W/TACHIRE	MOGAS	0.0	0.0	112.5	109.6	0.0	121.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0
		DIESEL	0.0	0.0	41.2	0.0	0.0	100.0	0.0	288.5	1934.4	2272.6	82.2	30.7	0.0
06302J200	HHB DIV ARTY HVV DIV	MOGAS	0.0	0.0	26.3	5.4	0.0	8.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		DIESEL	0.0	0.0	9.8	0.0	0.0	5.0	0.0	1.0	8.6	8.9	5.4	0.0	0.0
06307J200	TGT ACQ BTRY HVV DIV	MOGAS	0.0	0.0	4.4	5.4	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	12.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
06365J210	FA BN 155 SP HVV DIV	MOGAS	0.0	0.0	5.3	0.0	0.0	25.0	0.0	72.4	432.5	545.0	17.3	10.1	0.0
		DIESEL	0.0	0.0	20.0	25.6	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06366J210	HHB FA BN 155SP HVV DIV	MOGAS	0.0	0.0	12.8	7.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	7.0	60.2	62.3	2.5	3.4	0.0
06366J220	HHB FA BN 155SP HVV DIV	MOGAS	0.0	0.0	12.8	7.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	7.0	60.2	62.3	2.4	3.4	0.0
06367J220	FA BTRY 155SP HVV DIV	MOGAS	0.0	0.0	1.1	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	19.6	111.6	146.6	2.2	2.2	0.0

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVY DIV AR 6TK M1 4M FVS (SRC 87000J230) — Cont'd

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
063691200	SVC BTRY 155SP HVY DIV	MOGAS	0.0	0.0	3.9	7.6	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	6.6	37.5	42.9	8.2	0.0	
063951200	FA BN, 81NMLRS HVY DIV	MOGAS	0.0	0.0	21.4	22.0	0.0	26.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	10.0	0.0	69.3	619.7	619.8	19.7	0.0	
063961200	HHB 81NMLRS BN HVY DIV	MOGAS	0.0	0.0	6.4	3.6	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	25.8	26.7	2.4	0.0	
063961202	AUGFIST, TANK BN	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.0	0.3	
063971200	FA BTRY 81N SP HVY DIV	MOGAS	0.0	0.0	3.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2	163.0	200.2	2.1	0.0	
063981200	FA BTRY MLRS	MOGAS	0.0	0.0	3.8	3.6	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	169.4	113.0	7.1	0.0	
063991200	SVC BTRY 81NMLRS HVY DIV	MOGAS	0.0	0.0	4.7	7.6	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	10.0	0.0	8.4	98.5	79.7	5.7	0.0	
072451210	INF BN-MECH EW BFRS	MOGAS	0.0	0.0	2.8	25.2	0.0	29.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	5.1	0.0	0.0	45.0	0.0	147.0	1744.3	1130.9	7.8	0.0	
072461210	HHC INF BN MECH BFRS	MOGAS	0.0	0.0	2.2	25.2	0.0	29.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	20.0	0.0	54.2	636.3	505.7	5.8	0.0	
072471210	RIFLE CO INF BN MECH BFRS	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	19.2	242.6	120.7	0.4	0.0	
072481200	ANTARMOR CO INF BN(M) IT	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	16.0	137.6	142.4	0.4	0.0	
082051200	MEDICAL BN HVY DIV	MOGAS	0.0	0.0	46.7	28.6	0.0	52.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	11.1	0.0	0.0	20.0	0.0	15.0	129.0	133.5	14.3	0.0	
082061200	HHD MED BN HVY DIV	MOGAS	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	
082071200	MED CO MED BN HVY DIV	MOGAS	0.0	0.0	10.4	5.8	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	5.0	43.0	44.5	2.8	0.0	
082081200	MED SPT CO MED BN HVY DIV	MOGAS	0.0	0.0	13.7	11.2	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.1	0.0	
093581200	MSL SPT CO HVY DIV	MOGAS	0.0	0.0	27.6	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	30.0	56.7	0.0	1.3	4.0	0.0	2.0	36.8	25.5	7.6	0.0	
110351200	SIGNAL BN (HEAVY DIV)	MOGAS	0.0	0.0	79.3	37.6	0.0	15.3	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	20.0	0.0	0.0	0.0	0.0	12.1	0.0	
110361200	HHC SIG BN (HEAVY DIV)	MOGAS	0.0	0.0	13.8	4.0	0.0	3.3	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.9	0.0	
110371200	CMD OPNS CO (HEAVY DIV)	MOGAS	0.0	0.0	27.2	13.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.1	0.0	
110381200	FWD COMM CO HEAVY DIVISION	MOGAS	0.0	0.0	24.3	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.2	0.0	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVY DIV AR 6TK M1 4M FVS (SRC 87000J230) — (Cont'd)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
42004J200	SUP CO FWD SPT BN HVY DIV	MOGAS	0.0	0.0	2.5	7.2	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	21.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0
42005J200	S&T BN HEAVY DIVISION	MOGAS	0.0	0.0	16.2	32.6	0.0	39.3	14.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	28.0	3.4	0.0	43.5	17.0	0.0	0.0	0.0	0.0	32.8	0.0	0.0
42006J200	HHC S&T BN HEAVY DIVISION	MOGAS	0.0	0.0	0.8	21.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
42007J200	S&S CO S&T BN HVY DIV	MOGAS	0.0	0.0	13.7	0.0	0.0	25.5	14.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	28.0	0.0	0.0	43.5	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0
43004J200	MAINT CO, FWD SPT BN, HVY DIV	MOGAS	0.0	0.0	33.2	16.0	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	7.0	11.8	0.0	9.8	11.0	0.0	3.0	45.4	34.4	9.3	0.0	0.0
43004J201	TK SYSTEM SPT TM	MOGAS	0.0	0.0	0.5	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.7	0.0	0.0
43004J202	INF SYS(M) SPT TM	MOGAS	0.0	0.0	3.5	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	0.0
43005J200	MAINT BN, SPT COMD, HVY DIV	MOGAS	0.0	0.0	83.3	66.4	0.0	79.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	37.0	133.7	0.0	26.8	17.0	0.0	6.0	90.7	68.9	27.3	0.0	0.0
43006J200	HQ&SUPORT CO HVY DIV	MOGAS	0.0	0.0	7.3	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	5.2	0.0	17.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0
43007J200	LIGHT MAINT CO HVY DIV	MOGAS	0.0	0.0	32.9	25.4	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	88.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0
43008J200	HEAVY MAINT CO HVY DIV	MOGAS	0.0	0.0	15.5	29.4	0.0	53.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	7.0	3.6	0.0	8.5	13.0	0.0	4.0	54.0	43.3	7.1	0.0	0.0
55087J200	TMT CO S&T BN HEAVY DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	13.9	0.0	0.0
55089J200	TMT CO (HV) S&T BN HVY DIV	MOGAS	0.0	0.0	1.7	11.6	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	1.7	0.0	0.0	7.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0
55427J200	TAM CO, CBT SPT, AVN BN, CBA	MOGAS	0.0	0.0	16.7	13.0	1.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	16.0	45.2	0.0	8.5	5.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0
63001J210	SPT COMD, 6 × 4, HVY DIV, AR	MOGAS	0.0	0.0	282.4	216.0	0.0	308.3	14.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	149.0	272.6	0.0	163.6	92.0	0.0	40.0	441.8	394.7	132.6	0.0	0.0
63002J200	HHC, SPT COMD, HVY DIV	MOGAS	0.0	0.0	0.8	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		DIESEL	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
63003J200	DMMC, SPT COMD, HVY DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0
63005J210	FWD SPT BN 2 × 2 HVY DIV	MOGAS	0.0	0.0	43.1	23.2	0.0	41.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		DIESEL	0.0	28.0	14.8	0.0	31.1	11.0	0.0	6.0	71.2	61.1	17.2	0.0	0.0
63005J220	FWD SPT BN 2 × 2 HVY DIV	MOGAS	0.0	0.0	46.6	23.2	0.0	47.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		DIESEL	0.0	28.0	14.8	0.0	31.1	11.0	0.0	7.0	79.8	70.0	17.9	0.0	0.0

332.0

630061200	HHD,FWD SPT BN,HEAVY DIV	MOGAS	0.0	0.0	2.8	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
870001230	HVY DIV,AR 6TK M1,4M FVS	MOGAS	0.0	2.0	774.5	924.4	1.5	922.4	14.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0		
		DIESEL	86.4	263.0	407.5	0.0	193.6	529.0	0.0	5032.8	33835.8	26427.8	435.6	31.1				11567.0
870041210	HHC ARMORED DIVISION	JP4																
		MOGAS	0.0	0.0	16.0	14.8	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	34.4	35.6	2.1	0.0	0.0	0.0	0.0	
870421210	HHC ARMD DIV BDE	MOGAS	0.0	0.0	5.9	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0	0.0	0.0	0.0	
870421220	HHC INF DIV (MECH) BDE	MOGAS	0.0	0.0	8.9	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0	0.0	0.0	0.0	

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY HVY DIV M 5TK M1 5M BFVS (SRC 870001240)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
012851210	CBT SPT AVN BN (HVY DIV)	MOGAS	0.0	0.0	46.1	37.6	1.5	21.3	0.0	0.0	0.0	0.0	0.0	0.0	1872.8
		DIESEL	0.0	22.0	45.8	0.0	8.5	19.0	0.0	0.0	0.0	0.0	13.6	0.0	
012861210	HHC, CBT SPT AVN BN (HVY)	JP4	0.0	0.0	7.5	12.6	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.2	0.0	
012871200	GEN SPT AVN CO	MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	5.3	0.0	1540.8
033871200	CHEMICAL CO, HVY DIV	JP4	0.0	0.0	36.8	4.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	6.0	51.6	53.4	9.5	0.0	
051451210	ENGR BN, HVY DIV - RIBBON	MOGAS	0.0	2.0	22.6	45.6	0.0	102.7	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	86.4	68.0	2.8	0.0	8.5	34.0	0.0	147.1	1583.2	1311.5	36.9	0.0	
051461200	HQ,HQ COMPANY	MOGAS	0.0	0.0	4.1	7.6	0.0	11.5	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	0.6	0.0	8.5	7.0	0.0	1.0	8.6	8.9	7.4	0.0	
051471200	ENGR CO, ENGR BN, HVY DIV	MOGAS	0.0	0.5	4.2	7.6	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	17.0	0.6	0.0	0.0	5.0	0.0	36.5	393.6	325.6	5.3	0.0	
051481210	BRIDGE COMPANY - RIBBON	MOGAS	0.0	0.0	1.7	7.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	86.4	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	8.2	0.0	
063001220	MECH DIVARTY W/TACFIRE	MOGAS	0.0	0.0	112.5	109.6	0.0	121.5	0.0	0.0	0.0	0.0	0.3	0.0	
		DIESEL	0.0	0.0	41.2	0.0	0.0	100.0	0.0	288.5	1934.4	2272.6	82.2	30.7	
063021200	HHB DIV ARTY HVY DIV	MOGAS	0.0	0.0	26.3	5.4	0.0	8.4	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	9.8	0.0	0.0	5.0	0.0	1.0	8.6	8.9	5.4	0.0	
063071200	TGT ACQ BTRY HVY DIV	MOGAS	0.0	0.0	4.5	5.4	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	12.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	5.0	0.0	
063651210	FA BN 155 SP HVY DIV	MOGAS	0.0	0.0	20.0	25.6	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	25.0	0.0	72.4	432.5	545.0	17.3	10.1	
063651220	FA BN 155 SP HVY DIV	MOGAS	0.0	0.0	20.0	25.6	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	25.0	0.0	72.4	432.5	545.0	17.3	10.1	
063661210	HHB FA BN 155SP HVY DIV	MOGAS	0.0	0.0	12.8	7.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	7.0	60.2	62.3	2.5	3.4	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVV DIV M 5TK M1 5M BFVS (SRC 87000J240) — (Cont'd)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
06366J200	HBB FA BN 155SP HVV DIV	MOGAS	0.0	0.0	12.8	7.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	7.0	60.2	62.3	2.4	3.4	
06367J200	FA BTRY 155SP HVV DIV	MOGAS	0.0	0.0	1.1	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	19.6	111.6	146.6	2.2	2.2	
06369J200	SVC BTRY 155SP HVV DIV	MOGAS	0.0	0.0	3.9	7.6	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	6.6	37.5	42.9	8.2	0.0	
06395J200	FA BN, 8IN/MLRS HVV DIV	MOGAS	0.0	0.0	21.4	22.0	0.0	26.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	10.0	0.0	69.3	619.7	619.8	19.7	0.0	
06396J200	HBB 8IN/MLRS BN HVV DIV	MOGAS	0.0	0.0	6.4	3.6	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	25.8	26.7	2.4	0.0	
06396J201	AUGFIST, MECH BN	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.0	0.3	
06397J200	FA BTRY 8IN SP HVV DIV	MOGAS	0.0	0.0	3.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2	163.0	200.2	2.1	0.0	
06398J200	FA BTRY MLRS	MOGAS	0.0	0.0	3.8	3.6	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	169.4	113.0	7.1	0.0	
06399J200	SVC BTRY 8IN/MLRS HVV DIV	MOGAS	0.0	0.0	4.7	7.6	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	10.0	0.0	8.4	98.5	79.7	5.7	0.0	
07245J210	INF BN/MECH EW BFVS	MOGAS	0.0	0.0	2.8	25.2	0.0	29.9	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	5.1	0.0	0.0	45.0	0.0	147.0	1744.3	1130.9	7.8	0.0	
07246J210	HHC INF BN MECH BFVS	MOGAS	0.0	0.0	2.2	25.2	0.0	29.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	20.0	0.0	54.2	636.3	505.7	5.8	0.0	
07247J210	RIFLE CO INF BN MECH BFVS	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	19.2	242.6	120.7	0.4	0.0	
07248J200	ANTARMOR CO INF BN(M) IT	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	16.0	137.6	142.4	0.4	0.0	
08205J200	MEDICAL BN HVV DIV	MOGAS	0.0	0.0	46.7	28.6	0.0	52.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	11.1	0.0	0.0	20.0	0.0	15.0	129.0	133.5	14.3	0.0	
08206J200	HHD MED BN HVV DIV	MOGAS	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	
08207J200	MED CO MED BN HVV DIV	MOGAS	0.0	0.0	10.4	5.8	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	5.0	43.0	44.5	2.8	0.0	
08208J200	MED SPT CO MED BN HVV DIV	MOGAS	0.0	0.0	13.7	11.2	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.1	0.0	
09558J200	MSL SPT CO HVV DIV	MOGAS	0.0	0.0	27.6	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	56.7	0.0	1.3	4.0	0.0	2.0	36.8	25.5	7.6	0.0	
11035J200	SIGNAL BN (HEAVY DIV)	MOGAS	0.0	0.0	79.3	37.6	0.0	15.3	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	20.0	0.0	0.0	0.0	0.0	12.1	0.0	
11036J200	HHC SIG BN (HEAVY DIV)	MOGAS	0.0	0.0	13.8	4.0	0.0	3.3	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.9	0.0	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVV DIV M 5TK M1 5M BFVS (SRC 87000J240)—(Cont'd)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
34288J200	INTL-SVL CO MI BN CEWI DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	51.6	53.4	2.8	0.0	
34289J200	SVC SPT CO MI BN CEWI DIV	MOGAS	0.0	0.0	35.0	18.8	0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	4.4	25.0	28.6	6.0	0.0	
42004J200	SUP CO FWD SPT BN HVV DIV	MOGAS	0.0	0.0	2.5	7.2	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	21.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	4.9	0.0	
42005J200	S&T BN HEAVY DIVISION	MOGAS	0.0	0.0	16.2	32.6	0.0	39.3	14.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	28.0	3.4	0.0	43.5	17.0	0.0	0.0	0.0	0.0	32.8	0.0	
42006J200	HHC S&T BN HEAVY DIVISION	MOGAS	0.0	0.0	0.8	21.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.1	0.0	
42007J200	S&S CO S&T BN HVV DIV	MOGAS	0.0	0.0	13.7	0.0	0.0	25.5	14.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	28.0	0.0	0.0	43.5	0.0	0.0	0.0	0.0	0.0	10.1	0.0	
43004J200	MAINT CO,FWD SPT BN, HVV DIV	MOGAS	0.0	0.0	33.2	16.0	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	7.0	11.8	0.0	9.8	11.0	0.0	3.0	45.4	34.4	9.3	0.0	
43004J201	TK SYSTEM SPT TM	MOGAS	0.0	0.0	0.5	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.7	0.0	
43004J202	INF SYS(M) SPT TM	MOGAS	0.0	0.0	3.5	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	
43005J200	MAINT BN,SPT COMD,HVV DIV	MOGAS	0.0	0.0	83.3	66.4	0.0	79.1	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	37.0	153.7	0.0	26.8	17.0	0.0	6.0	90.7	68.9	27.3	0.0	
43006J200	HQSUPPORT CO HVV DIV	MOGAS	0.0	0.0	7.3	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.2	0.0	17.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	
43007J200	LIGHT MAINT CO HVV DIV	MOGAS	0.0	0.0	32.9	25.4	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	88.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	
43008J200	HEAVY MAINT CO HVV DIV	MOGAS	0.0	0.0	15.5	29.4	0.0	53.2	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	7.0	3.6	0.0	8.5	13.0	0.0	4.0	54.0	43.3	7.1	0.0	
55087J200	TMT CO S&T BN HEAVY DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	13.9	0.0	
55089J200	TMT CO (HVV) S&T BN HV DIV	MOGAS	0.0	0.0	1.7	11.6	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.7	0.0	0.0	7.0	0.0	0.0	0.0	0.0	6.7	0.0	
55427J200	TAM CO,CBT SPT,AVN BN,CBA	MOGAS	0.0	0.0	16.7	13.0	1.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	16.0	45.2	0.0	8.5	5.0	0.0	0.0	0.0	0.0	5.1	0.0	
63001J220	SPT COMD,6×4,HVV DIV,INF	MOGAS	0.0	0.0	285.4	216.0	0.0	308.3	14.0	0.0	0.0	0.0	0.4	0.0	
		DIESEL	0.0	149.0	272.6	0.0	163.6	92.0	0.0	40.0	441.8	394.7	132.7	0.0	
63002J200	HHC, SPT COMD, HV DIV	MOGAS	0.0	0.0	0.8	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	
63003J200	DNMC,SPT COMD,HV DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	

332.0

630053210	FWD SPT BN 2×1 Hvy DIV	MOGAS	0.0	0.0	43.1	23.2	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
		DIESEL	0.0	28.0	14.8	0.0	31.1	11.0	0.0	6.0	71.2	61.1	17.2	0.0				
630053220	FWD SPT BN 2×2 Hvy DIV	MOGAS	0.0	0.0	46.6	23.2	0.0	47.0	0.0	0.0	0.0	0.0	0.1	0.0				
		DIESEL	0.0	28.0	14.8	0.0	31.1	11.0	0.0	7.0	79.8	70.0	17.9	0.0				
630053230	FWD SPT BN 1×2 Hvy DIV	MOGAS	0.0	0.0	46.1	23.2	0.0	41.4	0.0	0.0	0.0	0.0	0.1	0.0				
		DIESEL	0.0	28.0	14.8	0.0	31.1	11.0	0.0	6.0	71.2	61.1	17.3	0.0				
63006200	HHD,FWD SPT BN,HEAVY DIV	MOGAS	0.0	0.0	2.8	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.0				
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0				
870003240	Hvy DIV M 5TK M1.5M (B/FVS)	MOGAS	0.0	2.0	783.7	913.4	1.5	939.4	14.0	0.0	0.0	0.0	3.0	0.0				
		DIESEL	86.4	263.0	412.6	0.0	193.6	574.0	0.0	4541.6	32009.3	24753.8	434.6	31.1				
87004220	HHC INFANTRY DIVISION (MECH)	JP4																11567.0
		MOGAS	0.0	0.0	17.9	14.8	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0				
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	34.4	35.6	2.1	0.0				
87042210	HHC ARMD DIV BDE	MOGAS	0.0	0.0	5.9	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0				
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0				
87042220	HHC INF DIV (MECH) BDE	MOGAS	0.0	0.0	8.9	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0				
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0				

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY Hvy DIV FULL 6TK M1 4MB FVS (SRC 87000J250)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
012851210	CBT SPT AVN BN (Hvy DIV)	MOGAS	0.0	0.0	46.1	37.6	1.5	21.3	0.0	0.0	0.0	0.0	0.0	0.0	1872.8
		DIESEL	0.0	22.0	45.8	0.0	8.5	19.0	0.0	0.0	0.0	0.0	0.0	13.6	
		JP4													
01286210	HHC, CBT SPT AVN BN (Hvy)	MOGAS	0.0	0.0	7.5	12.6	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	1540.8
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	3.2	
		JP4													
01286211	HHC, CSAB, CBAA AAPRS	MOGAS	0.0	0.0	0.0	9.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	
		JP4													
01287200	GEN SPT AVN CO	MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	5.3	
		JP4													
01287201	GSAC, CSAB, CBAA AAPRS	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
03387200	CHEMICAL CO, Hvy DIV	MOGAS	0.0	0.0	36.8	4.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	6.0	51.6	53.4	9.5	0.0	
		JP4													
03387201	DECON PLT	MOGAS	0.0	0.0	0.0	0.0	0.0	15.7	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	
		JP4													
05145210	ENGR BN, Hvy DIV - RIBBON	MOGAS	0.0	2.0	22.6	45.6	0.0	102.7	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	86.4	68.0	2.8	0.0	8.5	34.0	0.0	147.1	1583.2	1311.5	36.9	0.0	
		JP4													
05146200	HQ-HQ COMPANY	MOGAS	0.0	0.0	4.1	7.6	0.0	11.5	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	0.6	0.0	8.5	7.0	0.0	1.0	8.6	8.9	7.4	0.0	
		JP4													
05147200	ENGR CO, ENGR BN, Hvy DIV	MOGAS	0.0	0.5	4.2	7.6	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	17.0	0.6	0.0	0.0	5.0	0.0	36.5	393.6	325.6	5.3	0.0	
		JP4													

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVY DIV FULL 6TK M1 4MB FVS (SRC 87000J250)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	S6	SV	TI	CC	SR	WV	OV	AV
05147J201	ARMED VEH LAUNCHED BR AUG	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	53.1	37.6	0.0	0.0	
05148J210	BRIDGE COMPANY - RIBBON	MOGAS	0.0	0.0	1.7	7.6	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	86.4	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	8.2	0.0	
06300J210	ARMED DIVARTY W/TACFIRE	MOGAS	0.0	0.0	112.5	109.6	0.0	121.5	0.0	0.0	0.0	0.0	0.3	0.0	
		DIESEL	0.0	0.0	41.2	0.0	0.0	100.0	0.0	288.5	1934.4	2272.6	82.2	30.7	
06302J200	HHB DIV ARTY HVY DIV	MOGAS	0.0	0.0	26.3	5.4	0.0	8.4	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	9.8	0.0	0.0	5.0	0.0	1.0	8.6	8.9	5.4	0.0	
06307J200	TGT ACQ BTRY HVY DIV	MOGAS	0.0	0.0	4.4	5.4	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	12.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	5.0	0.0	
06365J210	FA BN 155 SP HVY DIV	MOGAS	0.0	0.0	20.0	25.6	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	25.0	0.0	72.4	432.5	545.0	17.3	10.1	
06365J220	FA BN 155 SP HVY DIV	MOGAS	0.0	0.0	20.0	25.6	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	25.0	0.0	72.4	432.5	545.0	17.3	10.1	
06366J210	HHB FA BN 155SP HVY DIV	MOGAS	0.0	0.0	12.8	7.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	7.0	60.2	62.3	2.5	3.4	
06366J220	HHB FA BN 155SP HVY DIV	MOGAS	0.0	0.0	12.8	7.2	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	5.0	0.0	7.0	60.2	62.3	2.5	3.4	
06367J200	FA BTRY 155SP HVY DIV	MOGAS	0.0	0.0	1.1	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	19.6	111.6	146.6	2.2	2.2	
06369J200	SVC BTRY 155SP HVY DIV	MOGAS	0.0	0.0	3.9	7.6	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	6.6	37.5	42.9	8.2	0.0	
06395J200	FA BN, 8INMLRS HVY DIV	MOGAS	0.0	0.0	21.4	22.0	0.0	26.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	10.0	0.0	69.3	619.7	619.8	19.7	0.0	
06396J200	HHB 8INMLRS HVY DIV	MOGAS	0.0	0.0	6.4	3.6	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	25.8	26.7	2.4	0.0	
06396J202	AUG-FIST, TANK BN	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.0	0.3	
06397J200	FA BTRY 8IN SP HVY DIV	MOGAS	0.0	0.0	3.2	3.6	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2	163.0	200.2	2.1	0.0	
06398J200	FA BTRY MLRS	MOGAS	0.0	0.0	3.8	3.6	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	169.4	113.0	7.1	0.0	
06399J200	SVC BTRY 8INMLRS HVY DIV	MOGAS	0.0	0.0	4.7	7.6	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	10.0	0.0	8.4	98.5	79.7	5.7	0.0	
07245J210	INF BN MECH EW BFFS	MOGAS	0.0	0.0	2.8	25.2	0.0	29.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	5.1	0.0	0.0	45.0	0.0	147.0	1744.3	1130.0	7.8	0.0	
07246J210	HHC INF BN MECH BFFS	MOGAS	0.0	0.0	2.2	25.2	0.0	29.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	2.3	0.0	0.0	20.0	0.0	54.2	636.3	506.7	5.8	0.0	
07247J210	RIFLE CO INF BN MECH BFFS	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	19.2	242.6	120.7	0.4	0.0	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVY DIV FULL 6TK MI 4MB FVS (SRC87000J250) — (Cont'd)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
17202J200	HQ & HQ TROOP, CBAA	MOGAS	0.0	0.0	7.6	4.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	
17202J201	HQ & HQ TROOP, CBAA AAPRS	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17205J210	CAV SQDN, CBAA AHIS HVY DIV	MOGAS	0.0	0.0	20.0	29.2	0.0	23.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	1.1	0.0	2.6	20.0	0.0	89.0	1067.6	668.7	13.7	0.6	
		JP4													1604.8
17206J210	HQ AND HQ TRP, CAV SQDN	MOGAS	0.0	0.0	20.0	29.2	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	1.1	0.0	2.6	20.0	0.0	21.8	238.5	201.8	12.5	0.6	
		JP4													142.0
17206J211	CAV SQDN, CBAA AAPRS	MOGAS	0.0	0.0	0.0	1.8	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17207J210	CAV TRP, CAV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	414.6	233.4	0.3	0.0	
17208J210	AIR CAV TRP, CAV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
		JP4													731.4
17235J120	TANK BATTALION EQ W/M1	MOGAS	0.0	0.0	1.4	36.2	0.0	12.0	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	638.2	3570.8	2804.9	8.9	0.0	
17236J120	HHC, TK BN (M1)	MOGAS	0.0	0.0	1.4	36.2	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.4	401.2	305.1	7.8	0.0	
17237J120	TANK CO (M1)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.2	792.4	625.0	0.3	0.0	
19217J200	MP CO-HVY DIV	MOGAS	0.0	0.0	3.2	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.3	0.0	
34285J200	MI BN (CEWI) HVY DIV	MOGAS	0.0	0.0	63.4	18.8	0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	16.5	0.0	0.0	17.0	0.0	11.4	85.2	90.9	13.4	0.4	
34286J200	HQ HQ-OP CO MI BN CEWI DIV	MOGAS	0.0	0.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.5	0.0	0.0	12.0	0.0	1.0	8.6	8.9	3.1	0.0	
34287J200	EW CO MI BN CEWI, DIV	MOGAS	0.0	0.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.4	
34287J201	AUG-3 ELINT TMS	MOGAS	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	
34287J202	AUG-3 VHF ECM TMS	MOGAS	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
34289J200	SVC SPT CO MI BN CEWI DIV	MOGAS	0.0	0.0	35.0	18.8	0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	4.4	25.0	28.6	6.0	0.0	
34289J201	AUG-MAINTENANCE	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
42004J200	SUP CO FWD SPT BN HVY DIV	MOGAS	0.0	0.0	2.5	7.2	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	21.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	4.9	0.0	

420051200	S&T BN HEAVY DIVISION	MOGAS	0.0	0.0	16.2	32.6	0.0	39.3	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	28.0	3.4	0.0	43.5	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
420061200	HHC S&T BN HEAVY DIVISION	MOGAS	0.0	0.0	0.8	21.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
420071200	S&S CO S&T BN Hvy DIV	MOGAS	0.0	0.0	13.7	0.0	0.0	25.5	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	28.0	0.0	0.0	43.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0
420071201	AUG - GREG PLT	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
420071202	AUG - CEB PLT	MOGAS	0.0	0.0	7.6	36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
430041200	MAINT CO, FWD SPT BN, Hvy DIV	MOGAS	0.0	0.0	33.2	16.0	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	7.0	11.8	0.0	9.8	11.0	0.0	3.0	45.4	34.4	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
430041201	TK SYSTEM SPT TM	MOGAS	0.0	0.0	0.5	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
430041202	INF SYS(M) SPT TM	MOGAS	0.0	0.0	3.5	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
430051200	MAINT BN, SPT COMD, Hvy DIV	MOGAS	0.0	0.0	83.3	66.4	0.0	79.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	37.0	153.7	0.0	26.8	17.0	0.0	6.0	90.7	68.9	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
430061200	HQSUPPORT CO Hvy DIV	MOGAS	0.0	0.0	7.3	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	5.2	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0
430071200	LIGHT MAINT CO Hvy DIV	MOGAS	0.0	0.0	32.9	25.4	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	88.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
430081200	HEAVY MAINT CO Hvy DIV	MOGAS	0.0	0.0	15.5	29.4	0.0	53.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	7.0	3.6	0.0	8.5	13.0	0.0	4.0	54.0	43.3	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550871200	TMET CO S&T BN HEAVY DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550891200	TMT CO (HY) S&T BN Hvy DIV	MOGAS	0.0	0.0	1.7	11.6	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	1.7	0.0	0.0	7.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
554271200	TAM CO, CBT SPT, AVN BN, CBA	MOGAS	0.0	0.0	16.7	13.0	1.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	16.0	45.2	0.0	8.5	5.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JP4																				
554271201	TAMC, CSAB, CBA4 APPRS	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
554271202	TAM CO AUG (UH-1)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
630011210	SPT COMD, 6X4, Hvy DIV, AR	MOGAS	0.0	0.0	282.4	216.0	0.0	308.3	14.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	149.0	272.6	0.0	163.6	92.0	0.0	40.0	441.8	394.7	132.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
630021200	HHC, SPT COMD, Hvy DIV	MOGAS	0.0	0.0	0.8	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
630021201	AUG-DIVISION MAIT	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
630031200	DMMC, SPT COMD, Hvy DIV	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
630051210	FWD SPT BN 2 X 1 Hvy DIV	MOGAS	0.0	0.0	37.5	23.2	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	28.0	43.1	0.0	31.1	11.0	0.0	6.0	71.2	61.1	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

332.0

Table 2-15. Class III Bulk Planning Factors — (Cont'd)

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HVV DIV FULL 6TK MI 4MB FVS (SRC 87000J250) — (Cont'd)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
630061220	FWD SPT BN 2 × 2 HVV DIV	MOGAS	0.0	0.0	46.6	23.2	0.0	47.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	28.0	14.8	0.0	31.1	11.0	0.0	7.0	79.8	70.0	17.9	0.0	
		MOGAS	0.0	0.0	2.8	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	
630061200	HHD, FWD SPT BN, HEAVY DIV	MOGAS	0.0	2.0	830.5	1023.6	1.5	1017.8	14.0	0.0	0.0	0.0	2.8	0.0	
		DIESEL	86.4	275.0	407.5	0.0	213.2	527.0	0.0	5073.6	34332.9	26752.5	464.9	31.7	
		JP4													15827.0
		MOGAS	0.0	0.0	16.0	14.8	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	
870041210	HHC ARMORED DIVISION	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	34.4	35.6	2.1	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
870041211	AUG-STAFF JUDGE ADVOCATE	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
870041212	AUG-AUTOMATION MGT OFFICE	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
870421210	HHC ARMD DIV BDE	DIESEL	0.0	0.0	5.9	9.4	0.0	4.0	0.0	0.0	0.0	0.0	1.6	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
870421211	AUG-RIFLE PLATOON	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	72.0	34.4	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	8.9	9.4	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
870421220	HHC INF DIV (MECH) BDE	DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
870421221	AUG-RIFLE PLATOON	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	72.0	34.4	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
AR DIV 6-M60 4-M113 2-AHB (SRC 87000J410)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
012571410	CBT SPT AVN CO (CBAA) (UH-1)	MOGAS	0.0	0.0	9.4	21.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	6.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	6.0	0.0	
		JP4													2438.0
		MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	
012871400	GEN SPT AVN CO	DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	5.0	0.0	
		JP4													1540.8
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	10.0	0.0	
013851410	ATTACK HEL BN (AH-1)	JP4													3551.7
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	10.0	0.0	
		JP4													489.9
013861410	HQ AND SVC CO (AH-1)	MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.0	0.0	
		JP4													489.9
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OY	AV
08078J400	MEDICAL CO (FSB) Hvy DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	10.4 2.2	5.8 0.0	0.0 0.0	13.0 5.0	0.0 0.0	0.0 5.0	0.0 43.0	0.0 44.5	0.0 3.1	0.0 0.0	12687.0
09558J400	MSL SPT CO Hvy DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	22.7 40.2	4.0 0.0	0.0 1.3	1.0 5.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 6.9	0.0 0.0	
09558J402	SGT YORK AUG, MSL SPT CO	MOGAS DIESEL	0.0 0.0	0.0 30.0	3.0 26.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 2.0	0.0 36.8	0.0 25.5	0.0 2.4	0.0 0.0	
11035J500	SIG BN Hvy DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	141.8 17.3	17.8 0.0	0.0 0.0	15.4 20.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.3 18.4	0.0 0.0	
11036J500	HHC SIG BN HEAVY DIV	MOGAS DIESEL	0.0 0.0	0.0 0.0	25.1 0.6	4.0 0.0	0.0 0.0	9.4 5.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.3 5.8	0.0 0.0	
11037J500	CMD OPS CO	MOGAS DIESEL	0.0 0.0	0.0 0.0	35.6 6.6	4.0 0.0	0.0 0.0	1.0 5.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 4.4	0.0 0.0	
11038J500	FWD COMM CO	MOGAS DIESEL	0.0 0.0	0.0 0.0	38.3 0.6	4.0 0.0	0.0 0.0	1.0 5.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 3.3	0.0 0.0	12114J400
11039J500	AREA SIGNAL CO	MOGAS DIESEL	0.0 0.0	0.0 0.0	42.8 9.6	5.8 0.0	0.0 0.0	4.0 5.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 4.8	0.0 0.0	
12114J400	DIVISION BAND	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	
17201J410	CAV BDE AIR ATK (AH-1) (AOE)	MOGAS DIESEL	0.0 0.0	0.0 36.0	89.9 1.7	86.8 0.0	0.0 9.1	62.5 21.0	0.0 0.0	0.0 0.0	0.0 998.8	0.0 597.5	0.0 46.6	0.0 0.6	
17202J400	HQ & HQ TROOP, CBAA	MOGAS DIESEL	0.0 0.0	0.0 0.0	13.2 0.6	7.6 0.0	0.0 0.0	7.4 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 3.0	0.0 0.0	1604.8
17205J410	CAV SQDN, CBAA AHIS Hvy DIV	MOGAS DIESEL	0.0 0.0	0.0 8.0	18.7 0.6	16.6 0.0	0.0 2.6	23.4 12.0	0.0 0.0	0.0 0.0	0.0 998.8	0.0 597.5	0.0 13.7	0.0 0.6	
17206J410	HQ AND HQ TRP, CAV SQDN	MOGAS DIESEL	0.0 0.0	0.0 8.0	13.1 0.6	16.6 0.0	0.0 2.6	21.4 12.0	0.0 0.0	0.0 0.0	0.0 13.8	0.0 130.6	0.0 12.4	0.0 0.6	
17207J410	CAV TRP, CAV SQDN	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	1.0 0.0	0.0 0.0	0.0 0.0	0.0 414.6	0.0 233.4	0.0 0.3	0.0 0.0	
17208J410	AIR CAV TRP, CAV SQDN	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.2	0.0 0.0	731.4
17235J410	TANK BATTALION, EQ/W, M60	MOGAS DIESEL	0.0 0.0	0.0 0.0	3.9 0.6	23.6 0.0	0.0 0.0	16.0 7.0	0.0 0.0	0.0 0.0	0.0 165.4	0.0 1560.5	0.0 11.4	0.0 0.0	
17236J410	HHC, TK BN, M60	MOGAS DIESEL	0.0 0.0	0.0 0.0	3.9 0.6	23.6 0.0	0.0 0.0	16.0 7.0	0.0 0.0	0.0 0.0	0.0 53.4	0.0 508.3	0.0 10.3	0.0 0.0	
17237J410	TK CO, TK BN, M60	MOGAS DIESEL	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 28.0	0.0 263.1	0.0 0.3	0.0 0.0	

**SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
AR DIV 6-M60 4-M113 2-AHB (SRC 87000J410) — (Cont'd)**

**SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
MX DIV 5-M60 5-M113 2-AHB (SRC 87000J420)**

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
01257410	CRT SPT AVN CO (CBAA) (UH-1)	MOGAS	0.0	0.0	9.4	21.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	2438.0
		DIESEL	0.0	6.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	5.5	
		JP4													
		MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	
01287400	GEN SPT AVN CO	DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	5.3	1540.8
		JP4													
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	9.5	
01385410	ATTACK HEL BN (AH-1)	MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	3551.7
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
01386410	HQ AND SVC CO (AH-1)	DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	8.6	489.9
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01387410	ATK HEL CO (AH-1)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1020.6
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		JP4													
		MOGAS	0.0	0.0	36.8	4.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	
03387400	CHEMICAL CO, Hvy DIV	DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	6.0	51.6	53.4	9.5	0.0	
		MOGAS	0.0	2.0	24.2	33.0	0.0	104.2	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	86.4	68.0	3.4	0.0	8.5	34.0	0.0	150.5	1612.7	1338.5	37.3	0.0	
		MOGAS	0.0	0.0	5.0	5.8	0.0	15.5	0.0	0.0	0.0	0.0	0.1	0.0	
05146400	HQ-HQ COMPANY	DIESEL	0.0	0.0	0.6	0.0	8.5	7.0	0.0	3.0	25.8	26.7	7.8	0.0	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
MX DIV 5-M60 5-M113 2-AHB (SRC 87000J420) — (Cont'd)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
110351500	SIG BN Hvy DIV	MOGAS	0.0	0.0	141.8	17.8	0.0	15.4	0.0	0.0	0.0	0.0	0.3	0.0	
		DIESEL	0.0	0.0	17.3	0.0	0.0	20.0	0.0	0.0	0.0	0.0	18.4	0.0	
110361500	HHC SIG BN HEAVY DIV	MOGAS	0.0	0.0	25.1	4.0	0.0	9.4	0.0	0.0	0.0	0.0	0.3	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.8	0.0	
110371500	CMD OPS CO	MOGAS	0.0	0.0	35.6	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	6.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.4	0.0	
110381500	FWD COMM CO	MOGAS	0.0	0.0	38.3	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.3	0.0	
110391500	AREA SIGNAL CO	MOGAS	0.0	0.0	42.8	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	9.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.8	0.0	
12114400	DIVISION BAND	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
172011410	DAV BDE AIR ATK (AH-1) (AOE)	MOGAS	0.0	0.0	89.9	86.8	0.0	62.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	36.0	1.7	0.0	9.1	21.0	0.0	81.0	998.8	597.5	46.6	0.6	12687.0
17202400	HQ & HQ TROOP, CBAA	MOGAS	0.0	0.0	13.2	7.6	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	
17205410	CAV SQDN, CBAA AHIS Hvy DIV	MOGAS	0.0	0.0	18.7	16.6	0.0	23.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	2.6	12.0	0.0	81.0	998.8	597.5	13.7	0.6	1604.8
17206410	HQ AND HQ TRP, CAV SQDN	MOGAS	0.0	0.0	13.1	16.6	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	2.6	12.0	0.0	13.8	169.7	130.6	12.4	0.6	142.0
17207410	CAV TRP, CAV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	414.6	233.4	0.3	0.0	
17208410	AIR CAV TRP, CAV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
17235410	TANK BATTALION, EQ/M, M60	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	731.4
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	165.4	2121.9	1560.5	11.4	0.0	
17236410	HHC, TK BN, M60	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	53.4	636.2	508.3	10.3	0.0	
17237410	TK CO, TK BN, M60	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	371.4	263.1	0.3	0.0	
19217400	MP CO-Hvy DIV	MOGAS	0.0	0.0	4.6	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.5	0.0	
34285400	MI BN (CEW) Hvy DIV	MOGAS	0.0	0.0	42.9	13.4	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	15.6	0.0	0.0	17.0	0.0	16.2	132.9	138.9	7.8	0.3	
34286400	HQ & HQ-HQ-OP CO MI BN CEW DIV	MOGAS	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	12.0	0.0	2.0	17.2	17.8	1.8	0.0	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
MX DIV 5-M60 5-M113 2-AHB (SRC 87000J420) — (Cont)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
87000J420	MX DIV, 5-M60, 5-M113, 2-AHB	MOGAS	0.0	2.0	868.4	564.6	2.9	894.6	0.0	0.0	0.0	0.0	1.6	0.0	13019.0
		DIESEL	86.4	284.0	392.7	0.0	201.0	416.0	0.0	2057.0	21457.2	18444.3	482.4	33.3	
		JP4													
		MOGAS	0.0	0.0	40.2	7.6	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	
87042J410	HHC INFANTRY DIVISION (MECH)	DIESEL	0.0	0.0	1.5	0.0	0.0	0.0	0.0	5.0	43.0	44.5	5.1	0.0	
		MOGAS	0.0	0.0	6.2	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0	
		MOGAS	0.0	0.0	8.9	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
87042J420	HHC INF DIV (MECH) BDE	DIESEL	0.0	0.0	0.0	0.0	0.0	5.0	0.0	9.2	72.7	76.6	1.6	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
AR DIV 6-M1 4-BFVS 2-AHB (SRC 87000J430)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
01257J420	CBT SPT AVN CO (CBAA) (UH-60)	MOGAS	0.0	0.0	9.4	21.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	2142.0
		DIESEL	0.0	6.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	5.3	0.0	
		JP4													
		MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	
01287J400	GEN SPT AVN CO	DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	5.3	0.0	1540.9
		JP4													
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.5	0.0	
01385J420	ATTACK HEL BN (AH-64)	JP4													3848.7
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.5	0.0	
		JP4													
01386J420	HQ AND SVC CO (AH-64)	MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	489.9
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	8.6	0.0	
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01387J420	ATK HEL CO (AH-64)	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1119.6
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
03387J400	CHEMICAL CO, HVT DIV	MOGAS	0.0	0.0	36.8	4.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	6.0	51.6	53.4	9.5	0.0	
		MOGAS	0.0	0.0	24.2	33.0	0.0	104.2	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	86.4	68.0	3.4	0.0	8.5	34.0	0.0	150.5	1612.7	1338.5	37.3	0.0	
05145J410	ENGR BN, HVT DIV - RIBBON	MOGAS	0.0	0.0	5.0	5.8	0.0	15.5	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	0.6	0.0	8.5	7.0	0.0	3.0	25.8	26.7	7.8	0.0	
		MOGAS	0.0	0.5	4.2	5.8	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	17.0	0.6	0.0	0.0	5.0	0.0	36.5	393.6	325.6	5.2	0.0	
05147J400	ENGR CO, ENGR BN, HVT DIV	MOGAS	0.0	0.0	2.5	4.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.6	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	86.4	0.0	0.6	0.0	0.0	7.0	0.0	1.4	12.3	9.3	8.5	0.0	
05148J410	BRIDGE COMPANY - RIBBON	MOGAS	0.0	0.0	0.6	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	
		MOGAS	0.0	0.0	0.6	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	86.4	0.0	0.6	0.0	0.0	7.0	0.0	1.4	12.3	9.3	8.5	0.0	

**SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
AR DIV 6-M1 4-BFVS 2-AHB (SRC 87000J430) — (Cont'd)**

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
110391500	AREA SIGNAL CO	MOGAS	0.0	0.0	42.8	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	12985.0
		DIESEL	0.0	0.0	9.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	4.8	0.0	
121141400	DIVISION BAND	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
172011420	CAV BDE AIR ATK (AH-64) (AOE)	MOGAS	0.0	0.0	89.9	86.8	0.0	62.5	0.0	0.0	0.0	0.0	0.0	0.0	1604.8
		DIESEL	0.0	36.0	1.7	0.0	9.1	21.0	0.0	81.0	998.8	597.5	46.4	0.6	
		J4													
172021400	HQ & HQ TROOP, CBAA	MOGAS	0.0	0.0	13.2	7.6	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	
172051410	CAV SQDN, CBAA AH IS HVY DIV	MOGAS	0.0	0.0	18.7	16.6	0.0	23.4	0.0	0.0	0.0	0.0	0.0	0.0	142.0
		DIESEL	0.0	8.0	0.6	0.0	2.6	12.0	0.0	81.0	998.8	597.5	13.7	0.6	
		J4													
172061410	HQ AND HQ TRP, CAV SQDN	MOGAS	0.0	0.0	13.1	16.6	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	2.6	12.0	0.0	13.8	169.7	130.6	12.4	0.6	
		J4													
172071410	CAV TRP, CAV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	731.4
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	414.6	233.4	0.3	0.0	
172081410	AIR CAV TRP, CAV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
		J4													
172351420	TANK BATTALION EQ W/M1	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	731.4
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	675.8	3865.9	3059.8	14.4	0.0	
172361420	HHG, TK BN, (M1)	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	71.0	696.3	560.0	13.3	0.0	
172371420	TANK CO, (M1)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	731.4
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.2	792.4	625.0	0.3	0.0	
192171400	MP CO-HVY DIV	MOGAS	0.0	0.0	4.6	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.5	0.0	
342851400	MI BN (CEW) HVY DIV	MOGAS	0.0	0.0	42.9	13.4	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	142.0
		DIESEL	0.0	0.0	15.6	0.0	0.0	17.0	0.0	16.2	132.9	138.9	7.8	0.3	
342861400	HQ & HQ-OP CO MI BN CEW DIV	MOGAS	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	12.0	0.0	2.0	17.2	17.8	1.8	0.0	
342871400	C&J CO MI BN CEW, DIV	MOGAS	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	142.0
		DIESEL	0.0	0.0	15.0	0.0	0.0	0.0	0.0	12.0	103.2	106.8	1.6	0.3	
342891400	SVC SPT CO MI BN CEW DIV	MOGAS	0.0	0.0	38.4	13.4	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	2.2	12.5	14.3	4.4	0.0	
420041400	SUP CO FWD SPT BN HVY DIV	MOGAS	0.0	0.0	1.7	3.6	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	142.0
		DIESEL	0.0	14.0	0.6	0.0	27.6	5.0	0.0	0.0	0.0	0.0	5.2	0.0	
420071400	S&S CO MAIN SPT BN HVY DIV	MOGAS	0.0	0.0	6.6	11.6	0.0	35.8	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	21.0	30.6	0.0	35.9	5.0	0.0	0.0	0.0	0.0	10.9	0.0	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
MX DIV 5-M1 5-BFVS 2-AHB (SRC 87000J440)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
01257J420	CBT SPT AVN CO (CBA4) (UH-6)	MOGAS	0.0	0.0	9.4	21.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	2142.0
		DIESEL	0.0	6.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	5.3	0.0	
		JP4													
		MOGAS	0.0	0.0	21.9	12.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	
01287J400	GEN SPT AVN CO	DIESEL	0.0	6.0	0.6	0.0	0.0	9.0	0.0	0.0	0.0	0.0	5.3	0.0	1540.8
		JP4													
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.5	0.0	
01385J420	ATTACK HEL BN (AH-64)	JP4													3848.7
		MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	9.5	0.0	
		JP4													
01386J420	HQ AND SVC CO (AH-64)	MOGAS	0.0	0.0	13.3	14.8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	489.9
		DIESEL	0.0	8.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	8.6	0.0	
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01387J420	ATK HEL CO (AH-64)	DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1119.6
		JP4													
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
03387J400	CHEMICAL CO, Hvy DIV	MOGAS	0.0	0.0	36.8	4.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	53.4
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	6.0	51.6	0.0	9.5	0.0	
		MOGAS	0.0	0.0	24.2	33.0	0.0	104.2	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	86.4	68.0	3.4	0.0	8.5	34.0	0.0	150.5	1612.7	1338.5	37.3	0.0	
05145J410	ENGR BN, Hvy DIV - RIBBON	MOGAS	0.0	0.0	5.0	5.8	0.0	15.5	0.0	0.0	0.0	0.0	0.1	0.0	26.7
		DIESEL	0.0	0.0	0.6	0.0	8.5	7.0	0.0	3.0	25.8	0.0	7.8	0.0	
		MOGAS	0.0	0.5	4.2	5.8	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	17.0	0.6	0.0	0.0	5.0	0.0	36.5	393.6	325.6	5.2	0.0	
05147J400	ENGR CO, ENGR BN, Hvy DIV	MOGAS	0.0	0.0	2.5	4.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	9.3
		DIESEL	86.4	0.0	0.6	0.0	0.0	7.0	0.0	1.4	12.3	0.0	8.5	0.0	
		MOGAS	0.0	0.0	89.4	42.6	0.0	78.5	0.0	0.0	0.0	0.0	0.3	0.0	
		DIESEL	0.0	0.0	38.2	0.0	0.0	75.0	0.0	234.7	1484.1	1765.8	67.9	32.4	
05148J410	BRIDGE COMPANY - RIBBON	MOGAS	0.0	0.0	23.5	1.8	0.0	8.4	0.0	0.0	0.0	0.0	0.2	0.0	8.9
		DIESEL	0.0	0.0	9.8	0.0	0.0	5.0	0.0	1.0	8.6	0.0	5.5	0.0	
		MOGAS	0.0	0.0	4.4	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	12.6	0.0	0.0	10.0	0.0	0.0	0.0	0.0	3.5	0.0	
06300J420	MECH DIVARTY	MOGAS	0.0	0.0	18.1	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	432.5
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	72.4	432.5	545.0	17.2	10.4	
		MOGAS	0.0	0.0	18.1	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	72.4	432.5	545.0	17.2	10.4	
06302J400	HHB DIV ARTY Hvy DIV	MOGAS	0.0	0.0	18.1	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	441.1
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
		MOGAS	0.0	0.0	20.2	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
06307J400	TGT ACQ BTRY Hvy DIV	MOGAS	0.0	0.0	18.1	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	60.2
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
		MOGAS	0.0	0.0	20.2	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
06353J420	FA BN 155 SP Hvy DIV	MOGAS	0.0	0.0	18.1	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	62.3
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
		MOGAS	0.0	0.0	20.2	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
06354J20	FA BN 155 SP Hvy DIV	MOGAS	0.0	0.0	18.1	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	62.3
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
		MOGAS	0.0	0.0	20.2	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
06354J30	FA BN 155 SP Hvy DIV	MOGAS	0.0	0.0	18.1	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	62.3
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
		MOGAS	0.0	0.0	20.2	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
06364J10	HHB FA BN 155SP Hvy DIV	MOGAS	0.0	0.0	18.1	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	62.3
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	
		MOGAS	0.0	0.0	20.2	13.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	5.3	0.0	0.0	20.0	0.0	73.4	441.1	553.9	17.2	11.6	

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
MX DIV 5-M1 5-BFVS 2-AHB (SRC 87000J440) — (Cont'd)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
17205J410	CAV SQDN, CBAA AH-S Hvy Div	MOGAS	0.0	0.0	18.7	16.6	0.0	23.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	2.6	12.0	0.0	81.0	998.8	597.5	13.7	0.6	
		JP4													1604.8
17206J410	HQ AND HQ TRP, CAV SQDN	MOGAS	0.0	0.0	13.1	16.6	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	8.0	0.6	0.0	2.6	12.0	0.0	13.8	169.7	130.6	12.4	0.6	142.0
		JP4													
17207J410	CAV TRP, CAV SQDN	MOGAS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	414.6	233.4	0.3	0.0	
		MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
		JP4													
17235J420	TANK BATTALION EQ W/M1	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	675.8	3865.9	3059.8	14.4	0.0	
		MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	71.0	696.3	560.0	13.3	0.0	
17237J420	TANK CO, (M1)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.2	792.4	625.0	0.3	0.0	
19217J400	MP CO-Hvy Div	MOGAS	0.0	0.0	4.6	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	2.5	0.0	
34285J400	MI BN (CEW) Hvy Div	MOGAS	0.0	0.0	42.9	13.4	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	15.6	0.0	0.0	17.0	0.0	16.2	132.9	138.9	7.8	0.3	
34286J400	HQ & HQ-OP CO MI BN CEW Div	MOGAS	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	12.0	0.0	2.0	17.2	17.8	1.8	0.0	
34287J400	C&J CO MI BN CEW Div	MOGAS	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	15.0	0.0	0.0	0.0	0.0	12.0	103.2	106.8	1.6	0.3	
34289J400	SVC SPT CO MI BN CEW Div	MOGAS	0.0	0.0	34.8	13.4	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	2.2	12.5	14.3	4.4	0.0	
42004J400	SUP CO FWD SPT BN Hvy Div	MOGAS	0.0	0.0	1.7	3.6	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	14.0	0.6	0.0	27.6	5.0	0.0	0.0	0.0	0.0	5.2	0.0	
42007J400	S&S CO MAIN SPT BN Hvy Div	MOGAS	0.0	0.0	6.6	11.6	0.0	35.8	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	21.0	30.6	0.0	35.9	5.0	0.0	0.0	0.0	0.0	10.9	0.0	
43004J400	MAINT CO, FWD SPT BN, Hvy Div	MOGAS	0.0	0.0	25.4	16.0	0.0	20.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	7.0	11.1	0.0	9.8	7.0	0.0	3.0	45.4	34.4	10.4	0.0	
43004J401	TK SYSTEM SPT TM	MOGAS	0.0	0.0	1.1	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	
43004J402	INF SYS(M) SPT TM	MOGAS	0.0	0.0	2.4	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	
43007J400	LIGHT MAINT CO Hvy Div	MOGAS	0.0	0.0	42.3	11.6	1.4	24.9	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	64.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	

731.4

Table 2-15. Class III Bulk Planning Factors — (Cont'd)
SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
HSB MECH 1 BN TMK-60 2BN MECH M-113 (SRC 87100J420)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
05127J400	ENGR CO Hvy SEP BDE	MOGAS	0.0	0.0	3.9	9.4	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	22.0	0.0	0.0	0.0	0.0	0.0	43.5	465.0	398.1	6.2	0.0	
06375J420	FA BN, 155-MM SP, HSB (AOE)	MOGAS	0.0	0.0	24.3	35.8	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.6	0.0	0.0	0.0	0.0	72.4	432.5	545.0	16.5	11.3	
06376J420	HBB, FA BN, 155 SP SEP BD	MOGAS	0.0	0.0	19.6	7.2	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	7.0	60.2	62.3	4.2	4.6	
06377J400	FA BATTERY, 155-MM SP	MOGAS	0.0	0.0	0.8	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.6	111.6	146.6	2.3	2.2	
06379J400	SVC BTRY, FA BN, 155-MM SP	MOGAS	0.0	0.0	2.2	5.8	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	6.6	37.5	42.9	5.3	0.0	
07245J420	INF BN-MECH EW M113	MOGAS	0.0	0.0	8.8	7.6	0.0	26.1	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	12.0	0.0	124.8	1072.3	1105.1	12.0	0.0	
07246J420	HHC INF BN MECH M113	MOGAS	0.0	0.0	6.1	7.6	0.0	26.1	0.0	0.0	0.0	0.0	0.1	0.0	
		DIESEL	0.0	0.0	1.1	0.0	0.0	12.0	0.0	44.8	384.3	393.1	9.9	0.0	
07247J420	RIFLE CO INF BN MECH M113	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	137.6	142.4	0.4	0.0	
07248J400	ANTARMOR CO INF BN(M) IT	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	137.6	142.4	0.4	0.0	
08247J500	MEDICAL CO SEP BDE (HEAVY)	MOGAS	0.0	0.0	11.3	9.4	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	6.0	51.6	53.4	2.9	0.0	
17007J410	SEPARATE CAV TRP (M113)	MOGAS	0.0	0.0	0.5	3.6	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.2	220.3	236.8	1.6	0.0	
17235J410	TANK BATTALION, EOW, M60	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	165.4	2121.9	1560.5	11.4	0.0	
17236J410	HHC, TK BN, M60	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	53.4	636.2	508.3	10.3	0.0	
17237J410	TK CO, TK BN, M60	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	371.4	263.1	0.3	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
34144J400	MI CO (CEM) Hvy SEP BDE	MOGAS	0.0	0.0	17.2	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	8.0	68.8	71.2	3.1	0.0	
42084J400	S&I CO, SPT BN, SEP Hvy B	MOGAS	0.0	0.0	3.1	7.6	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	28.0	12.6	0.0	22.6	5.0	0.0	0.0	0.0	0.0	12.3	0.0	
43079J400	ORG (MT) CO SPT BN HSB	MOGAS	0.0	0.0	12.6	23.2	0.0	15.7	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	7.0	0.0	11.1	12.0	0.0	2.0	36.8	25.5	9.3	0.0	
43079J401	TK SYSTEM SPT TM	MOGAS	0.0	0.0	1.1	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	5.6	0.0	1.0	8.6	8.9	0.8	0.0	
43079J402	INF SYS(M) SPT TM	MOGAS	0.0	0.0	2.4	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	
43079J403	1-ARTY SYS SPT TM	MOGAS	0.0	0.0	4.3	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	

420791404	1-MSL SPT SEC	MOGAS	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
420791405	1-ELEC/COMSEC REP SEC	MOGAS	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
630851420	SPT BN, Hvy BDE (SEP) (1x2)	MOGAS	0.0	0.0	53.9	47.8	0.0	70.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	35.0	84.9	0.0	33.7	22.0	0.0	12.0	122.8	114.5	31.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
630861400	HHS, SPT BN Hvy BDE (SEP)	MOGAS	0.0	0.0	8.7	7.6	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
871001420	HSB, ME, 1BN TKN60, 2BN MECH M11	MOGAS	0.0	0.0	153.6	148.4	0.0	200.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	57.0	91.9	0.0	33.7	58.0	0.0	569.3	5685.0	5230.7	10.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0
871021420	HHC Hvy SEP BDE (MECH)	MOGAS	0.0	0.0	32.3	13.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	89.9	94.4	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
 HSB, ARM 2 BN TKN1, BN MECH BFV (SRC 871001430) — (Cont'd)

051271400	ENGR CO Hvy SEP BDE	MOGAS	0.0	0.0	3.9	9.4	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	22.0	0.0	0.0	0.0	0.0	0.0	43.5	485.0	398.1	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
063751410	FA BN, 155-MM SP, HSB (AOE)	MOGAS	0.0	0.0	24.3	35.8	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	3.6	0.0	0.0	0.0	0.0	72.4	432.5	545.0	16.5	11.3	0.0	0.0	0.0	0.0	0.0	0.0
063761410	HBB, FA BN, 155 SP SEP BD	MOGAS	0.0	0.0	19.6	7.2	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	3.0	0.0	0.0	0.0	0.0	7.0	60.2	62.3	4.1	4.6	0.0	0.0	0.0	0.0	0.0	0.0
063771400	FA BATTERY, 155MM SP	MOGAS	0.0	0.0	0.8	7.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.6	111.6	146.6	2.3	2.2	0.0	0.0	0.0	0.0	0.0	0.0
063791400	SVC BTRY, FA BN, 155-MM SP	MOGAS	0.0	0.0	2.2	5.8	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	0.0	0.0	6.6	37.5	42.9	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
072451410	INF BN-MECH EW BFVS	MOGAS	0.0	0.0	8.5	7.6	0.0	26.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	1.1	0.0	0.0	12.0	0.0	147.0	1744.3	1130.9	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
072461410	HHC INF BN MECH BFVS	MOGAS	0.0	0.0	5.8	7.6	0.0	26.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	1.1	0.0	0.0	12.0	0.0	54.2	636.3	505.7	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
072471410	RIFLE CO INF BN MECH BFVS	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	242.6	120.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
072481400	ANTIARMOR CO INF BN(M) IT	MOGAS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	137.6	142.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
082471500	MEDICAL CO SEP BDE (Hvy DIV)	MOGAS	0.0	0.0	11.3	9.4	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	2.2	0.0	0.0	5.0	0.0	6.0	51.6	53.4	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170071420	SEPARATE CAV TRP (M3)	MOGAS	0.0	0.0	0.5	3.6	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.6	423.2	242.3	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172351420	TANK BATTALION EQ WM1	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	675.8	3865.9	3059.8	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172361420	HHC, TK BN, (M1)	MOGAS	0.0	0.0	3.9	23.6	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	7.0	0.0	71.0	696.3	560.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172371420	TANK CO, (M1)	MOGAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.2	792.4	625.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
341441400	MI CO (GEW) Hvy SEP BDE	MOGAS	0.0	0.0	17.2	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DIESEL	0.0	0.0	0.6	0.0	0.0	5.0	0.0	8.0	68.8	71.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 2-15. Class III Bulk Planning Factors — (Cont'd)

SUMMARY OF BULK FUEL USAGE BY EQUIPMENT CATEGORY
1BN TMK-60 2BN MECH M-11 (SRC 87100J420) — (Cont'd)

SRC	UNIT NAME	FUEL TYPE	AB	CE	GN	HG	MH	SG	SV	TI	CC	SR	WV	OV	AV
42084J400	S&T CO, SPT BN, SEP HWY B	MOGAS	0.0	0.0	0.0	3.1	7.6	0.0	14.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	28.0	12.6	0.0	22.6	5.0	0.0	0.0	0.0	12.3	0.0	
43079J400	ORD (MT) CO SPT BN HSB	MOGAS	0.0	0.0	0.0	12.6	23.2	0.0	15.7	0.0	0.0	0.0	0.0	0.0	
		DIESEL	2.0	0.0	7.0	25.1	0.0	11.1	12.0	0.0	36.8	25.5	9.3	0.0	
43079J401	TK SYSTEM SPT TM	MOGAS	0.0	0.0	1.1	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	
43079J402	INF SYS(M) SPT TM	MOGAS	0.0	0.0	2.4	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	
43079J403	1-ARTY SYS SPT TM	MOGAS	0.0	0.0	4.3	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.6	8.9	0.8	0.0	
43079J404	1-MSL SPT SEC	MOGAS	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	
43079J405	1-ELEC/COMSEC REP SEC	MOGAS	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	
63085J410	SPT BN, HWY BDE, (SEP) (2 x 1)	MOGAS	0.0	0.0	50.9	47.8	0.0	70.4	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	35.0	83.4	0.0	33.7	22.0	0.0	12.0	0.0	0.0	31.8	0.0	
63086J400	HHC, SPT BN, HWY BDE (SEP)	MOGAS	0.0	0.0	8.7	7.6	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	
87100J430	HSB, AR 2BN TKM1, 1BN MECH FY	MOGAS	0.0	0.0	150.3	164.4	0.0	191.7	0.0	0.0	0.0	0.0	0.2	0.0	
		DIESEL	0.0	57.0	89.9	0.0	33.7	53.0	0.0	1680.3	0.0	8716.1	111.1	11.3	
87102J410	HHC HWY SEP BDE (ARMOR)	MOGAS	0.0	0.0	37.1	13.0	0.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	
		DIESEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	89.9	94.4	6.2	0.0	

SECTION IV. CLASS V

2-8. GENERAL. Class V supplies consist of ammunition of all types. Class V includes bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items. It also includes components of Class V items, such as boosters, heavy rocket mortars, jet-assisted takeoff devices, nuclear and non-nuclear warheads, and associated repair parts of assemblies which, because they contain explosives or are peculiar to ammunition, are issued through Class V supply channels. The scope of ammunition supply varies with the type of conflict and the operational environment where the conflict takes place. Ammunition service support is discussed in detail in FM 9-6.

a. Interrelationship of ammunition and tactics. Ammunition directly influences tactical operations. Therefore, tactical commanders must plan their operations and commit their forces with full awareness of the support capabilities of the ammunition service support structure. Likewise, CSS commanders must establish, stock, and employ ammunition service units with full awareness of the operational plans of the supported tactical commanders. An imbalance of either tactics or ammunition service may decisively influence operations. Both tactical and CSS commanders must consider tactics and ammunition services — not as individual entities, but as an inseparable unit that requires maximum attention, cooperation, and coordination.

b. Ammunition supply levels.

(1) Depending on its geographical location and possible contingencies, a theater is authorized a stated number of days (AR 11-11) of ammunition supply (SB 38-26). Using a hypothetical supply level of 45 days, the distribution would be as follows:

(a) Ten days in the combat zone to include three days at the direct support level and seven days at the general support level.

(b) Thirty-five days in the communications zone (COMMZ) for units in the combat zone.

(c) Forty-five days in the COMMZ for units in the COMMZ.

(2) To compute the requirements for the theater or major command, it is necessary to consider operational safety and order and ship time levels. During peacetime, additional stocks may be placed in a theater or major command for contingency plans or as other theater reserves. These stocks are bulk-allocated items and are not normally definable in terms of days of supply or rounds per weapon per day. Command/management and supply controls are used to properly supervise ammunition supply.

2-9. CHARACTERISTICS AND PLANNING CONSIDERATIONS.

a. Ammunition has many characteristics that make it different from all other classes of supply. Tactical commanders and logistics planners must understand these characteristics and how they affect ammunition supply and expenditure control.

b. Ammunition is an important part of a commander's combat power. Once a force is in combat, ammunition provides one of the principal means by which the tactical commander can influence the outcome of the battle.

c. Ammunition is a part of firepower and maneuver. It is used to destroy, neutralize, or deceive the enemy. It is also used to block, screen, and protect maneuvering forces.

d. Ammunition demands vary in direct ratio to the intensity of combat. In peacetime, ammunition demands are limited to training needs, maintenance of basic load, and stockage against war reserve levels. Because peacetime expenditures are low, demands are

not as urgent as during combat. Therefore, in peacetime, Class V supplies are often given a lower priority than other classes of supply.

e. Ammunition supply is a logistics action, but expenditure is a matter of tactical command decision. Both conventional and special ammunition are allocated from higher command to lower command. The primary concern of the support structure is to provide the ammunition needed to make the plan of the tactical commander work.

f. Ammunition planning is a responsibility of operations and logistics officers at all levels of command. It requires close coordination between tacticians and logisticians.

g. Ammunition planning is usually in support of broader strategic planning, and its objectives are developed from such plans. There is a vital need to include ammunition planning at the strategic level because of the long lead times involved and the cost of obtaining large amounts of Class V supplies.

h. Logistics planning for ammunition must cover both initial supply and resupply support. Special consideration must be given to weight and volume and the need for rapid movement to meet changing or unexpected demands.

2-10. PLANNING PHASES.

a. Estimation. The commander's concept of the broad course of action requires an initial estimate of the ammunition situation to test the feasibility of the operation plan and to serve as a basis for further decisions. Ammunition service staff officers are advised of the projected tactical plans in time to evaluate and provide information on the ability of the ammunition service support structure to support them. Some of the questions to be answered are discussed below.

(1) What conventional ammunition is required? This decision is significantly affected by the enemy threat and effectiveness obtained through weapon systems.

(2) What special ammunition is required? Will nuclear/chemical weapons be employed? Theater commanders are responsible for stating operational requirements for nuclear/chemical weapons to the Joint Chiefs of Staff.

(3) Is the required ammunition (both conventional and special) available? Materiel management centers are asked whether the quantities and types of ammunition required can be made available on a satisfactory time schedule.

(4) Can the ammunition be transported? Based on the time schedule of ammunition availability, the transportation allocated for movement, and the availability of off-loading facilities, the planner determines whether supply levels can be established by the date specified.

(5) What missile maintenance units will be required? Expansion of air defense coverage and all missile weapon densities affect maintenance and supply requirements.

b. Determination. The determination phase covers detailed planning based on decisions reached during preliminary planning. Ammunition planners confer with higher authority to verify basic loads and to determine the type of combat anticipated, including required supply rate. Deployment of divisions, separate units, or armored cavalry, infantry, combat engineers, artillery, and nuclear delivery units is determined. An agreement is reached on operational projects involving conventional or special ammunition.

(1) The ammunition planner arranges for basic loads to be issued if this has not been done. Based on command policies and coordination with tactical planners, the ammunition planner determines the amounts and types to be brought into the theater by

phased increments until the authorized level of supply is reached.

(2) A necessary part of planning is a list reflecting weapons and weapon systems to be in the hands of troops, troop strength, and the rate of deployment of weapons and troops to the theater. From this point on, the ammunition planner works in terms of rounds of conventional ammunition fired from weapons, numbers of specific special ammunition items allocated for use, and in other units of measure for bulk allotment and other ammunition items. The planner interprets the ammunition supply situation to tactical planners in terms of projected ability to meet operational requirements.

(3) Conventional ammunition to accompany troops and phased increments is normally expressed in terms of numbers of specific items. Special packing needs, such as damage or pallets, are included in the plan at this point. Requests for personnel to handle and maintain special ammunition are considered. Loading is planned to ensure against the total loss of a single type of ammunition if a carrier should be lost and to ensure that shipments include balanced stocks. Special consideration is given to dispersion of stocks when the enemy is known to have nuclear capabilities.

c. Modification. Modification, the final phase, is vital to effect changes in ammunition service due to the changing tactical situation. This phase is supervised by ammunition staff officers who are competent to alter the plan as required. Any departure from the approved plan must be coordinated with command headquarters staff. During this phase—

(1) Off-loading, transportation, security, storage, distribution, and inventory procedures are planned in detail. Provisions are made for the proper types and numbers of personnel, transportation, space, labor, and materials-handling equipment.

(2) Plans are reviewed or refined to provide for prompt delivery of selected items by air or other means to meet emergency resupply requirements.

2-11. COMMAND/MANAGEMENT CONTROLS.

Tactical commanders determine the required supply rate (RSR) for their operations. This may originally be based on planning factors such as those contained in Tables 2-16 through 2-19 or may be computed from experience factors available through the Standard Army Ammunition System. The RSR is given to the logistician who suggests a controlled supply rate (CSR) that is then confirmed by the tactical commander. The CSR is based on the availability of ammunition and the ability to move or locate it as desired within required timeframes. The command/management control used by the tactical commander may be varied as required.

2-12. SUPPLY CONTROLS.

Supply controls are normally announced by the Department of the Army or theater commander and are termed "allocations." These allocations are normally expressed as a quantity for a particular time, such as 500,000 rounds for 180 days. When the 180-day time period ends, any unused quantities of ammunition (those not drawn) terminate and cannot be added to subsequent allocations. This category of ammunition requires close coordination between the tactical commander and the ammunition service commander. Ammunition supply point (ASP) activities and tactical commanders are informed of the allocations which include a detailed list, usually by unit, indicating the quantity of ammunition they may draw during this allocation period. If a unit requests ammunition above the allocated quantity, even though the transportation order is authenticated, the ASP must request authority, usually from the corps, to issue this ammunition, and the corps will adjust quantities within its total allocation. Allocation by definition includes both supply control and availability. The difference is the degree of management and control. SB 38-26 contains details on estimated average quantity of ammunition required per day to sustain operations of a large force, 150,000 or more men, in an active combat theater. AR 11-11 contains details on days of supply authorized oversea commands.

Table 2-16. Ammunition Per Type Unit Per Weapon Per Day Expressed in Rounds and STON¹

Defense of Position													Attack of Position (deliberately organized)												
Succeeding days													Succeeding days												
First day													First day												
STON													STON												
Rds/ wpn													Rds/ wpn												
Total rds													Total rds												
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Table 2-16. Ammunition Per Type Unit Per Weapon Per Day Expressed in Rounds and STON' — (Cont'd)

Weapon	No. of wpsns	Packed w/rd	Defense of Position				Attack of Position (deliberately organized)				Protracted period						
			First day		Succeeding days		First day		Succeeding days								
			Rds/ wpsn	Total rds	STON	Rds/ wpsn	Total rds	STON	Rds/ wpsn	Total rds		STON	Rds/ wpsn	Total rds	STON		
			Part B. Infantry Division (continued)														
Howitzer, 8 in, SP, M110	4	262.50	177	708	92.9	164	656	86.1	130	520	68.3	127	508	66.7	118	472	61.9
Lchr, GM, M222 (Dragon)	249	67.00	3	747	25.0	4	996	33.4	2	498	16.7	3	747	25.0	1	249	8.3
Lchr, grenade, 40mm, M203	1,193	.750	32	38,176	14.3	19	22,667	8.5	27	32,211	12.1	15	17,895	6.7	8	9,544	3.6
Lchr, rkt actf, 2.75 in, M158A1	54	27.00	42	2,268	30.6	25	1,350	18.2	35	1,890	25.5	19	1,026	13.9	11	594	8.0
Lchr, rkt actf, 2.75 in, 19 tube, M159	12	27.00	114	1,368	18.5	68	816	11.0	95	1,140	15.4	51	612	8.2	29	348	4.7
Lchr, rkt actf, 2.75 in, 19 tube (repairable), M200A1	30	27.00	114	3,420	46.2	68	2,040	27.5	95	2,850	38.5	51	1,530	20.7	29	870	11.7
Lchr, rkt multiple, 115mm, M91	9	93.33	See note 2														
Lchr, rkt, 66mm, M72 (LAW) ³	2,400	7.80	NA	700	2.7	NA	455	1.7	NA	595	2.3	NA	301	1.2	NA	175	0.7
Lchr, rkt, 66mm, 4 tube, M202, A1	92	8.75	16	1,472	6.4	10	920	4.0	14	1,288	5.6	7	644	2.8	4	368	1.6
Lchr, tubular, GM (TOW)	162	87.00	9	1,458	63.4	10	1,620	70.5	7	1,134	49.3	8	1,296	56.4	4	648	28.2
Machinegun, .50 cal, M2	373	.395	263	98,099	19.4	159	59,307	11.7	219	81,687	16.1	120	44,760	8.8	67	24,991	4.9
Machinegun, 7.62mm, M60	705	.093	649	457,545	21.3	333	277,065	12.9	541	381,405	17.7	295	207,975	9.7	164	115,620	5.4
Machinegun, 7.62mm, six barrels, M134	27	.093	6,000	162,000	7.5	3,600	97,200	4.5	4,980	13,446	6.3	2,698	72,603	3.4	1,500	40,500	1.9
Mortar, 81mm, M29, A1	81	17.32	145	11,745	101.7	88	7,128	61.7	121	9,801	84.9	66	5,346	46.3	37	2,997	26.0
Mortar, 4.2 in, M24, A1	43	40.00	163	7,009	140.2	99	4,257	85.1	136	5,848	117.0	74	3,182	63.6	41	1,763	35.3
Rifle, 5.56mm, M16A1	14,242	.042	148	2,107,816	44.3	90	1,281,700	26.9	124	1,766,009	37.1	67	954,214	20.0	38	541,196	11.4
Rifle, recoilless, 90-mm, M67	8	27.50	18	144	1.9	11	88	1.2	15	120	1.7	8	64	.9	5	40	.6
Submachinegun, .45 cal, M3, A1	159	.056	44	7,348	.2	27	4,509	1.0	37	6,179	.2	20	4,843	.1	11	1,837	.1
Tank, combat, full-tracked, 105-mm gun, M60, A1	54	68.49	78	4,212	144.2	47	2,538	86.9	65	3,510	120.2	35	1,890	64.7	20	1,080	37.0
Infantry division total (STON)					1,896.3			1,722.0		1,579.6			1,350.9				864.2
Part C. Mechanized Division (AM)																	
Mechanized Division (AM)																	
Armament Pod, actf, 7.62mm mg, M18, A1	6	.093	6,000	36,000	1.7	3,600	21,600	1.0	4,980	29,880	1.4	2,689	16,134	.8	1,500	9,000	.4
Armament subsystem, helicopter, 20mm auto gun, M35	4	.80	3,000	12,000	4.8	1,800	7,200	2.9	2,490	9,960	4.0	1,345	5,380	2.2	750	3,000	1.2
Armament subsystem, helicopter, 7.62mm, M23	13	.093	840	10,920	.5	509	6,617	.3	700	9,100	.4	382	4,966	.2	213	2,769	.1
Armament subsystem, helicopter																	
7.62mm mg	9	.093	2,250	20,250	.9	1,350	12,150	.6	1,868	16,812	.8	1,009	9,081	.4	563	5,067	.2
20mm lchr	9	.750	321	2,889	1.1	193	1,737	.7	266	2,394	.9	144	1,296	.5	80	720	.3
Armored reconnaissance airborne assault vehicle, M551																	
Cte, 152-mm	27	60.00	9	243	7.3	5	135	4.1	7	189	5.7	4	108	3.2	2	54	1.6
SIB (Shillelagh)	27	112.00	7	189	10.6	9	243	13.6	6	162	9.1	7	189	10.6	3	81	4.5
Gun, ADA, SP, 20-mm, M163	24	1.00	6,000	144,000	72.0	3,600	86,400	43.2	4,980	119,520	59.8	2,689	64,536	32.3	1,500	36,000	18.0
Howitzer, 155-mm, SP, M109	54	135.70	203	10,962	743.8	207	11,178	758.4	146	7,884	534.9	153	8,262	560.6	166	8,964	608.2
Howitzer, 8-in, SP, M110	12	262.50	177	2,124	278.8	164	1,968	258.3	130	1,660	204.8	127	1,524	200.0	118	1,416	185.9
Lchr, GM, M222 (Dragon)	164	67.00	3	492	16.5	4	656	22.0	2	328	11.0	3	492	16.5	1	164	5.5
Lchr, grenade, 40-mm, M203	1,113	.750	32	35,616	13.4	19	21,147	8.0	27	30,051	11.3	15	16,695	6.3	8	8,904	3.3
Lchr, rkt actf, 2.75-in, M158A1	18	27.00	42	756	10.2	25	450	6.1	35	630	8.5	19	342	4.6	11	198	2.7
Lchr, rkt actf, 2.75 in, 19-tube (repairable), M200A1	10	27.00	114	1,140	15.4	68	880	9.2	95	950	12.8	51	510	6.9	29	290	3.9
Lchr, rkt, multiple, 115mm, M91	9	93.33	See note 2														
Lchr, rkt, 66mm, M72 (LAW) ³	2,400	7.80	NA	700	2.7	NA	455	1.7	NA	595	2.3	NA	301	1.2	NA	75	0.7
Lchr, rkt, 66mm, 4-tube, M202, A1	84	8.75	16	1,344	5.9	10	840	3.7	14	1,176	5.1	7	588	2.6	4	336	1.5
Lchr, tubular, GM (TOW)	108	87.00	9	972	42.3	10	1,080	47.0	7	756	32.9	8	864	37.6	4	432	18.8
Machinegun, .50 cal, M2	1,238	.395	263	325,594	64.3	159	196,842	38.9	219	271,122	53.5	120	148,560	29.3	67	82,946	16.4
Machinegun, 7.62mm, M60	660	.093	649	428,340	19.9	393	259,380	12.1	541	357,060	16.6	295	194,700	9.1	164	108,240	5.0
Machinegun, 7.62mm, 6-barrel, M134	9	.093	6,000	54,000	2.5	3,600	32,400	1.5	4,980	44,820	2.1	2,689	24,201	1.1	1,500	13,500	.6

Mortar, 81-mm, M29, A1	54	17.32	145	7,830	67.8	88	4,752	41.2	121	6,534	56.6	66	3,564	30.9	37	1,998	17.3
Mortar, 4.2-in, M24, A1	49	40.0	163	7,987	159.7	99	4,851	97.0	136	6,664	133.3	74	3,636	62.5	41	2,009	40.2
Rifle, 5.56-mm, M16, A1	13,387	.042	148	1,980,240	41.6	90	1,204,200	25.3	124	1,659,120	34.8	67	896,460	18.8	38	508,440	10.7
Rifle, recoilless, 90-mm, M67	8	27.50	18	144	1.9	11	88	1.2	15	120	1.7	8	64	.9	5	40	.6
Submachine gun, .45 cal, M3, A1	673	.056	44	29,612	.8	27	18,171	.5	37	24,901	.7	20	13,460	.4	11	7,403	.2
Tank, combat, full-tracked, 105-mm gun, M60, A1	216	68.49	78	16,848	576.9	47	10,152	347.7	65	14,040	480.8	35	7,560	258.9	20	4,320	147.9
Mechanized division total (STON)				2,156.8				1,742.3			1,680.4			1,295.4			1,094.1

Airborne Division

Part D, Airborne Division

Armament pod, acct, 7.62-mm, mg, M18, A1	22	.093	6,000	132,000	6.1	3,600	79,200	3.7	4,980	109,560	5.1	2,689	59,158	2.8	1,500	33,000	1.5
Armament subsystem, helicopter, 20-mm auto-gun, M35	14	.80	3,000	42,000	16.8	1,800	25,200	10.1	2,490	34,860	13.9	1,345	18,830	7.5	750	10,500	4.2
Armament subsystem, helicopter, 7.62-mm mg, M23	65	.093	840	54,600	2.5	509	33,085	1.5	700	45,500	2.1	382	24,830	1.2	23	13,845	.6
Armament subsystem helicopter																	
7.62-mm mg	33	.093	2,250	74,250	3.5	1,350	44,550	2.1	1,868	61,644	2.9	1,009	33,297	1.6	563	18,579	.9
40-mm lchr	33	.750	321	10,593	4.0	193	6,369	2.4	266	8,778	3.3	144	4,752	1.8	80	2,640	1.0
Hi rate, M28, A1																	

Armored reconnaissance airborne assault vehicle, M551

Cty, 152-mm	54	60.00	9	486	14.6	5	270	8.1	7	387	11.3	4	216	6.5	2	108	3.2
StB (Shilleagh)	54	112.00	7	378	21.2	9	486	27.2	6	324	18.1	7	378	21.2	3	162	9.1
Gun, ADA, towed, 20-mm, M167	48	1.00	4,000	192,000	96.0	2,400	115,200	57.6	3,320	159,360	79.7	1,793	86,064	43.0	1,000	48,000	24.0
Howitzer, 105-mm, towed, M102	54	68.5	423	22,842	782.3	467	25,218	863.7	376	20,304	695.4	381	20,574	704.6	210	11,340	388.4
Lchr, GM, M222 (Dragon)	285	67.00	3	855	28.6	4	1,140	38.2	2	570	19.1	3	855	28.6	1	285	9.5
Lchr, grenade, 40-mm, M203	1,164	.750	32	37,248	14.0	19	22,116	8.3	27	31,428	11.8	15	17,460	6.5	8	9,312	3.5
Lchr, rkt acct, 2.75 in, M158, A1	66	27.00	42	2,772	37.4	25	1,650	22.3	35	2,310	31.2	19	1,254	16.9	11	726	9.8
Lchr, rkt acct, 2.75 in, 19 tube (repairable), M200A1	12	27.00	114	1,368	18.5	68	816	11.0	95	1,440	15.4	51	612	8.3	29	348	4.7
Lchr, rkt, 66-mm, M72 (LAW) ³	2,400	.780	NA	700	2.7	NA	455	1.7	NA	595	2.3	NA	301	1.2	NA	175	0.7
Lchr, rkt, 66mm, 4-tube, M202, A1	65	8.75	16	1,040	4.6	10	650	2.8	14	910	4.0	7	455	2.0	4	250	1.1
Lchr, tubular, GM (TOW)	114	87.00	9	1,026	44.6	10	1,140	49.6	7	798	34.7	8	912	39.7	4	456	19.8
Machine gun, .50 cal, M2	94	.395	293	24,722	4.9	159	14,946	3.0	219	20,586	4.1	120	11,280	2.2	67	6,298	1.2
Machine gun, 7.62mm, M60	691	.093	649	448,459	20.9	393	271,563	12.6	541	373,831	17.4	295	203,845	9.5	164	113,324	5.3
Machine gun, 7.62-mm, six barrels, M134	33	.093	6,000	198,000	9.2	3,600	118,800	5.5	4,980	164,340	7.6	2,689	88,737	4.1	1,500	49,500	2.3
Mortar, 81-mm, M29, A1	84	17.32	145	12,180	105.5	88	7,392	64.0	212	10,164	88.0	66	5,544	48.0	37	3,108	27.0
Mortar, 4.2-in, M24, A1	36	40.00	163	5,868	117.4	99	3,564	71.3	136	4,896	97.9	74	2,664	53.2	41	1,476	29.5
Rifle, 5.56-mm, M16A1	13,159	.042	148	1,947,532	40.9	90	1,184,310	24.9	124	1,631,716	34.3	67	881,653	18.5	38	500,042	10.5
Submachinegun, .45 cal, M3, A1	108	.056	44	4,752	.1	27	2,916	.1	37	3,996	.1	20	2,160	.1	11	1,188	.1
Airborne division total (STON)				1,373.4				1,277.9			1,180.7			1,018.7			552.2

Air Assault Division

Part E, Air Assault Division

Armament pod, acct, 7.62-mm mg, M18, A1	78	.093	6,000	468,000	21.8	3,600	280,800	13.1	4,980	388,440	18.1	2,689	209,742	9.8	1,500	117,000	5.4
Armament subsystem, helicopter, 20-mm auto-gun, M35	20	.80	3,000	60,000	24.0	1,800	36,000	14.4	2,490	49,800	19.9	1,345	26,900	10.8	750	15,000	6.0
Armament subsystem, helicopter, 7.62-mm mg, M23	188	.093	840	157,920	7.3	509	95,692	4.5	700	131,600	6.1	382	71,816	3.3	213	40,044	1.9
Armament subsystem, helicopter																	
7.62-mm	87	.093	2,250	195,750	9.1	1,350	117,450	5.5	1,868	162,516	7.6	1,009	87,783	4.1	563	48,981	2.3
40-mm lchr	87	.750	321	27,927	10.5	193	16,791	6.3	266	23,142	8.7	144	12,528	4.7	80	6,960	2.6
Hi rate, M28, A1																	
Gun, ADA, towed, 20-mm, M167	48	1.00	4,000	192,000	96.0	2,400	115,200	57.6	3,320	159,360	79.7	1,793	86,064	43.0	1,000	48,000	24.0
Howitzer, 105-mm, towed, M102	54	68.50	423	22,842	782.3	467	25,218	863.7	376	20,304	695.4	381	20,574	704.6	210	11,340	388.4
Howitzer, 105-mm, towed, M114	18	135.70	203	3,654	247.9	207	3,776	292.8	146	2,628	178.3	153	2,754	186.9	166	2,988	202.7
Lchr, GM, M222 (Dragon)	342	67.00	3	1,026	34.4	4	1,368	45.8	2	684	22.9	3	1,026	34.4	1	342	11.5
Lchr, grenade, 40-mm, M203	1,200	.750	32	38,400	14.4	19	22,800	8.6	27	32,400	12.2	15	18,000	6.8	8	9,600	3.6
Lchr, rkt, acct, 2.75-in, M158A1	174	27.00	42	7,308	98.7	25	4,350	58.7	35	6,090	82.2	19	3,306	44.6	11	1,914	25.8
Lchr, rkt, acct, 2.75-in, 19-tube (repairable), M200A1	120	27.00	114	13,680	184.7	68	8,160	110.2	95	11,400	153.9	51	6,120	82.6	29	3,480	47.0
Lchr, rkt, 66-mm, M72 (LAW) ³	2,400	.780	NA	700	2.7	NA	455	1.7	NA	595	2.3	NA	301	1.2	NA	175	0.7
Lchr, rkt, 66-mm, 4-tube, M202, A1	87	8.75	16	1,392	6.1	10	870	3.8	14	1,218	5.3	7	609	2.7	4	348	1.5

Rifle, 5.56-mm, M16A1	2,733	.042	148	404,484	8.5	90	245,970	5.2	124	338,892	7.1	67	183,111	3.8	38	103,854	2.2
Submachine gun, .45 cal, M3A1	159	.056	44	6,996	0.19	27	4,293	0.12	37	5,883	0.16	20	3,180	0.09	11	1,749	0.05
Tank, combat, full-tracked, 105-mm gun, M60A1	54	68.49	78	4,212	144.2	47	2,538	86.9	65	3,510	120.2	35	1,890	64.7	20	1,080	36.9
Total STON				485.6				404.5			375.5			300.6			265.4

Separate Infantry Brigade

Part H, Separate Infantry Brigade

Armored reconnaissance airborne assault vehicle, M551																	
152-mm Cig	9	60.00	9	81	2.4	5	45	1.4	7	63	1.9	4	36	1.1	2	18	0.5
SIB (Shillelagh)	9	112.00	7	63	3.5	9	81	4.5	6	54	3.0	7	63	3.5	3	27	1.5
Howitzer, 105-mm, Towed, M102	18	68.50	423	7,614	260.8	467	8,406	287.9	376	6,768	231.8	381	6,858	234.9	210	3,780	129.5
Launcher, grenade, 40-mm, M203	191	.750	32	6,112	2.3	19	3,629	1.4	27	5,157	1.9	15	2,865	1.1	8	1,528	0.6
Launcher, GM, M222 (Dragon)	30	67.00	3	90	3.0	4	120	4.0	2	60	2.0	3	90	3.0	1	30	1.0
Launcher, rkt, multiple, 115-mm, M91	3	93.33	See note 2														
Launcher, rkt, 66-mm 4 tube, M202, A1	17	8.75	16	272	1.2	10	170	0.7	14	238	1.0	7	119	0.5	4	68	0.3
Launcher, rkt, 66-mm, M72 (LAW) ³	610	7.80	NA	183	0.7	NA	115	0.4	NA	153	0.6	NA	79	0.3	NA	43	0.2
Launcher, tubular, GM, TOW	18	87.00	9	162	7.0	10	180	7.8	7	126	5.5	8	144	6.3	4	72	3.1
Machine gun, .50 cal, M2	93	.395	263	24,459	4.8	159	14,787	2.9	219	20,367	4.0	120	11,160	2.2	67	6,231	1.2
Machine gun, 7.62-mm, M60	108	.093	649	70,092	3.3	383	42,444	2.0	541	58,428	2.7	295	31,860	1.5	164	17,712	0.8
Mortar, 81-mm, M29A1	9	10.32	145	1,305	11.3	88	792	6.9	121	1,089	9.4	66	594	5.1	37	333	2.9
Mortar, 4.2-in, M24A1	11	40.00	163	1,793	35.9	99	1,089	21.8	136	1,496	29.9	74	814	16.3	41	451	9.0
Rifle, 5.56-mm, M16A1	2,542	.042	148	376,216	7.9	90	228,780	4.8	124	315,208	6.6	67	170,314	3.6	38	96,596	2.0
Rifle, recoilless, 90-mm, M67	1	27.50	19	19	0.26	11	11	0.15	15	15	0.2	8	8	0.11	5	5	0.07
Submachine gun, .45 cal, M3A1	142	.056	44	6,248	0.17	27	3,834	0.10	37	5,254	0.15	20	2,840	0.08	11	1,562	0.04
Tank, combat, full-tracked, 105-mm gun, M60A1	54	68.49	78	4,212	144.2	47	2,538	86.9	65	3,510	120.2	35	1,890	64.7	20	1,080	36.9
Total STON				488.8				433.7			420.9			344.3			189.6

Separate Light Infantry Brigade

Part I, Separate Light Infantry Brigade

Armament subsystem, hel, 7.62-mm mg, lt, M23	3	.093	840	2,520	.11	509	1,527	.07	700	2,100	.10	382	1,146	.05	213	639	.03
Armored reconnaissance airborne assault vehicle, M551																	
152-mm Cig	6	60.00	9	54	1.6	5	30	0.9	7	42	1.3	4	24	0.7	2	12	0.4
SIB (Shillelagh)	6	122.00	7	42	2.4	9	54	3.0	6	36	2.0	7	42	2.4	3	18	1.0
Howitzer, 105-mm, Towed, M102	18	68.50	423	7,614	260.8	467	8,406	287.9	376	6,768	231.8	381	6,858	234.9	210	3,780	129.5
Launcher, grenade, 40-mm, M203	148	.750	32	4,736	1.8	19	2,812	1.1	27	3,996	1.5	15	2,220	0.8	8	1,184	0.4
Launcher, GM, M222 (Dragon)	30	67.00	3	90	3.0	4	120	4.0	2	60	2.0	3	90	3.0	1	30	1.0
Launcher, rkt, multiple, 115-mm, M91	3	93.33	See note 2														
Launcher, rkt, 66-mm, 4 tube, M202, A1	12	8.75	16	192	0.8	10	120	0.5	14	168	0.7	7	84	0.4	4	48	0.2
Launcher, rkt, 66-mm, M72 (LAW) ³	476	7.80	NA	143	0.6	NA	90	0.4	NA	119	0.5	NA	62	0.2	NA	33	0.1
Launcher, tubular, GM, TOW	18	87.00	9	162	7.0	10	180	7.8	7	126	5.5	8	144	6.3	4	72	3.1
Machine gun, .50 cal, M2	8	.395	263	2,104	0.4	159	1,272	0.3	219	1,752	0.3	120	960	0.2	67	536	0.1
Machine gun, 7.62-mm, M60	94	.093	649	61,006	2.8	383	36,942	1.7	541	50,854	2.4	295	27,730	1.3	164	15,416	0.7
Mortar, 81-mm, M29A1	16	17.32	145	2,320	20.1	88	1,408	12.2	121	1,936	16.8	66	1,056	9.1	37	592	5.1
Rifle, 5.56-mm, M16A1	2,025	.042	148	299,700	6.3	90	182,280	3.8	124	251,100	5.3	67	135,675	2.8	38	76,950	1.6
Submachine gun, .45 cal, M3A1	16	.056	44	704	0.02	27	432	0.01	37	592	0.02	20	320	0.008	11	176	0.005
Total STON				307.8				323.3			270.2			262.2			143.2

Separate Airborne Brigade

Part I, Separate Airborne Brigade (Equipped with 106RR and TOW)

Armament subsystem, hel, 7.62-mm mg, lt, M23	3	.093	840	2,520	.11	509	1,527	.07	700	2,100	.10	382	1,146	.05	213	639	.03
Armored reconnaissance airborne assault vehicle, M551																	
152-mm Cig	6	60.00	9	54	1.6	5	30	0.9	7	42	1.3	4	24	0.7	2	12	0.4
SIB (Shillelagh)	6	112.00	7	42	2.4	9	54	3.0	6	36	2.0	7	42	2.4	3	18	1.0
Howitzer, 105-mm, Towed, M102	18	68.50	423	7,614	260.8	467	8,406	287.9	376	6,768	231.8	381	6,858	234.9	210	3,780	129.5
Launcher, grenade, 40-mm, M203	166	.750	32	5,952	2.2	19	3,354	1.3	27	5,022	1.9	15	2,790	1.0	8	1,488	0.6
Launcher, GM, M222 (Dragon)	30	67.00	3	90	3.0	4	120	4.0	2	60	2.0	3	90	3.0	1	30	1.0
Launcher, rkt, 66-mm, 4 tube, M202, A1	9	8.75	16	144	0.6	10	90	0.4	14	126	0.5	7	63	0.3	4	36	0.2

Machine gun, 7.62-mm, six barrels, M134	9	.093	6,000	54,000	2.5	3,600	32,400	1.5	4,980	44,820	2.1	2,689	24,201	1.1	1,500	13,500	0.6
Mortar, 4.2 in, M24A1	27	40.00	163	4,401	86.0	99	2,673	53.5	136	3,672	73.4	74	1,998	40.0	41	1,107	22.1
Rifle, 5.56-mm, M16A1	2,091	.042	148	309,468	6.5	90	188,190	4.0	124	259,284	5.4	67	140,097	2.9	38	79,458	1.7
Submachine gun, .45 cal, M3A1	338	.056	44	14,872	0.4	27	9,126	0.3	37	12,506	0.4	20	6,760	0.2	11	3,718	0.1
Total STON				500.7				439.6			388.3			329.3			274.5

Armored Cavalry Regiment (w/M60A1)

Part M, Armored Cavalry Regiment (Equipped with M60A1)

Armament subsystem, hel, 7.62-mm mg, lt, M23	22	.093	840	18,480	0.9	509	11,198	0.5	700	15,400	0.7	382	8,404	0.4	213	4,686	0.2
Armament subsystem, hel, 7.62-mm mg/40-mm lchtr, hi-rate, M28A1																	
7.62-mm mg	9	.093	2,250	20,250	1.0	1,350	12,150	0.6	1,868	16,812	0.8	1,009	9,081	0.4	563	5,067	0.2
40-mm lchtr	9	.750	321	2,889	1.1	193	1,737	0.7	266	2,394	0.9	144	1,296	0.5	80	720	0.3
Howitzer, 155-mm, towed SP, M114 & M109+	18	135.7	203	3,654	247.9	207	3,726	252.8	146	2,628	178.3	153	2,754	186.9	166	2,988	202.7
Launcher, grenade, 40-mm	238	.750	32	7,616	2.9	19	4,522	1.7	27	6,426	2.4	15	3,570	1.3	8	1,904	0.7
Launcher, rkt actf, 2.75-in, M158A41	18	28.00	42	756	10.2	25	450	6.1	35	630	8.5	19	342	4.6	11	198	2.7
Launcher, rkt actf, 2.75-in, 19-tube (repairable), M200A1	10	27.00	114	1,140	15.4	68	680	9.2	95	950	12.8	51	510	6.9	29	290	3.9
Launcher, rkt, 66-mm, 4-tube, M202, A1	31	8.75	16	496	2.2	10	310	1.4	14	434	1.9	7	217	0.9	4	124	0.5
Launcher, rkt, 66-mm, M72 (LAW) ³	408	7.80	NA	122	0.5	NA	73	0.3	NA	102	0.4	NA	61	0.2	NA	29	0.1
Machine gun, .50 cal, M2	392	.395	263	103,096	20.4	159	62,328	12.3	219	85,848	17.0	120	47,040	9.3	67	26,264	5.2
Machine gun, 7.62-mm, M60	214	.093	649	136,886	6.5	333	84,102	3.9	541	115,774	5.4	295	63,130	2.9	164	35,096	1.6
Machinegun, 7.62-mm, six barrels, M134	9	.093	6,000	54,000	2.5	3,600	32,400	1.5	4,980	44,820	2.1	2,689	24,201	1.1	1,500	13,500	0.6
Mortar, 4.2-in, M24A1	27	40.00	163	4,401	88.0	99	2,673	53.5	136	3,672	73.4	74	1,998	40.0	41	1,107	22.1
Rifle, 5.56-mm, M16A1	2,098	.042	148	310,800	6.5	90	189,000	4.0	124	260,400	5.5	67	140,700	2.9	38	79,800	1.7
Submachine gun, .45 cal, M3A1	338	.056	44	14,872	0.4	27	9,126	0.3	37	12,506	0.4	20	6,760	0.2	11	3,718	0.1
Tank, combat, full-tracked, 105-mm gun, M60A1	132	68.49	78	10,296	352.6	47	6,204	212.5	65	8,580	293.8	35	4,620	158.2	20	2,640	90.4
Total STON				739.2				561.6			604.4			416.9			330.1

Heavy Division Armor (87000J430)

CVF 25mm ¹	100	1.66	277	27,700	23.0	216	21,600	17.9	225	22,500	18.7	166	16,600	13.8	98	9,800	8.1
(TOW)																	
CEV ¹	8	92.40	9	900	39.2	10	1,000	43.5	7	700	30.5	8	800	34.8	4	400	17.4
ITV TOW ¹	48	87.00	13	624	27.1	15	720	31.3	10	480	20.9	12	576	25.1	6	288	12.5
AH-64 hel, 30mm ¹	36	1.75	770	27,720	24.3	602	21,672	19.0	628	22,608	19.8	463	16,668	14.6	274	9,864	8.6
2.75 rocket	72	11.83	26	936	5.5	15	540	3.2	21	756	4.5	12	432	2.6	7	252	1.5
Helifire	36	185.00	16	576	53.3	17	612	56.6	12	432	40.0	13	468	43.3	7	252	23.3
AH-1S TOW	8	87.00	12	864	37.6	13	468	20.4	9	324	14.1	10	360	15.7	5	360	15.7
2.75 rocket	16	11.83	42	1,512	8.9	25	900	5.3	35	1,260	7.5	19	684	4.0	11	396	2.3
20 mm	8	0.8	3,000	24,000	9.6	1,800	64,800	25.9	2490	89,640	35.9	1,345	48,420	19.4	750	6,000	2.4
IFV 25mm ¹	216	1.66	214	46,224	38.4	167	36,072	29.9	174	37,584	31.2	129	27,864	23.1	76	16,416	13.6
(TOW)																	
ADA, SP, 20mm	24	0.80	4,800	115,200	46.1	2,880	69,120	27.6	5	95,616	38.2	2,151	51,624	20.6	3	28,800	11.5
155mm Howitzer	72	99.62	203	14,616	728.0	207	14,904	742.4	146	10,512	523.6	153	11,016	548.7	166	11,952	595.3
Prop chg																	
Fuze																	
40mm M203	1,047	0.75	32	33,504	12.6	19	19,893	7.5	27	28,269	10.6	15	15,705	5.9	8	8,376	3.1
Launcher, 66mm, M202	48	87.00	16	768	3.4	10	480	2.1	14	672	2.9	7	336	1.5	4	192	0.8
MG, .50 cal	48	8.75	9	432	18.8	10	480	20.9	7	336	14.6	8	384	16.7	4	192	8.4
MG 7.62mm ACFT	60	0.09	263	299,820	59.2	159	181,620	35.8	219	249,660	49.3	120	136,800	27.0	67	76,380	15.1
MG 7.62mm fixed	704	0.09	840	50,400	2.3	509	30,540	1.4	700	42,000	2.0	382	22,920	1.1	213	12,780	0.6
MG 7.62mm lt flex	660	0.09	649	456,896	21.2	393	276,672	12.9	541	380,864	17.7	295	207,680	9.7	164	115,456	5.4
SAW 5.56mm	618	0.09	243	428,340	19.9	393	259,380	12.1	541	357,060	16.6	295	194,700	9.1	164	108,240	5.0
4.2in Mortar	316	40.00	163	150,174	6.8	147	90,846	4.1	202	124,836	5.6	110	67,980	3.1	61	37,698	1.7
MG 7.62mm RH Feed				265,440	12.3	509	160,844	7.5	700	221,200	10.3	382	120,712	5.6	213	67,308	3.1

Table 2-16. Ammunition Per Type Unit Per Weapon Per Day Expressed in Rounds and STON¹ — (Cont'd)

Weapon	No. of w/ps	Packed w/r/d	Rds/ w/ps	Defense of Position				Attack of Position (deliberately organized)				Protracted period					
				First day		Succeeding days		First day		Succeeding days		First day		Succeeding days			
				Total rds	STON	Total rds	STON	Total rds	STON	Total rds	STON	Total rds	STON	Total rds	STON		
Part M. Armored Cavalry Regiment (Equipped with M60A1) — Cont'd																	
M16 A1 rifle	13,266	0.04	148	1,963,368	41.2	90	1,193,940	25.1	124	1,644,984	34.5	67	888,822	18.7	38	504,108	10.6
90mm recoil, rfl	24	27.50	19	456	6.3	11	264	3.6	15	360	5.0	8	192	2.6	5	120	1.7
SMG 5.56mm ¹	1,296	0.09	153	198,288	8.9	92	119,232	5.4	127	164,592	7.4	69	89,424	4.0	38	49,248	2.2
Tank M1 ¹	348	68.49	37	12,876	440.9	22	7,656	262.2	31	10,788	369.4	16	5,568	190.7	9	3,132	107.3
SMG 45cal	288	0.06	44	12,672	0.4	27	7,776	0.2	37	10,656	0.3	20	5,760	0.2	11	3,168	0.1
Dragon	144	67.00	3	432	14.5	4	576	19.3	2	288	9.6	3	432	14.5	1	144	4.8
MLRS ¹	9	872.57	99	891	388.7	98	882	384.8	75	675	294.5	76	684	298.4	67	603	263.1
				2,651.6			2,309.4			2,064.8			1,739.1			1,454.2	
Heavy Division Mech (87000440)																	
CFV 25mm ¹	100	1.66	277	27,700	23.0	216	21,600	17.9	225	22,500	18.7	166	16,600	13.8	98	9,800	8.1
TOW		87.00	9	900	39.2	10	1,000	43.5	7	700	30.5	8	800	34.8	4	400	17.4
CEV	8	92.40	21	168	7.8	16	128	5.9	17	136	6.3	12	96	4.4	7	56	2.6
ITV TOW ¹	60	87.00	13	780	33.9	15	900	39.2	10	600	26.1	12	720	31.3	6	360	15.7
AH-64 hel 30mm ¹	36	1.75	770	27,720	24.3	602	21,672	19.0	628	22,608	19.8	463	16,668	14.6	274	9,864	8.6
2.75 rocket	72	11.83	26	936	5.5	15	540	3.2	21	756	4.5	12	432	2.6	7	252	1.5
Helifire	36	185.00	16	576	53.3	17	612	56.6	12	432	40.0	13	468	43.3	7	252	23.3
AH-1S TOW	8	87.00	12	864	37.6	13	468	20.4	9	324	14.1	10	360	15.7	5	360	15.7
2.75 rocket	16	11.83	42	1,512	8.9	25	900	5.3	35	1,260	7.5	19	684	4.0	11	396	2.3
20 mm	8	0.8	3,000	24,000	9.6	1,800	64,800	25.9	2,490	89,640	35.9	1,345	48,420	19.4	750	6,000	2.4
IPV 25 mm	270	1.66	214	57,780	48.0	167	45,090	37.4	174	46,980	39.0	129	34,830	28.9	76	20,520	17.0
TOW		87.00	6	1,620	70.5	7	1,890	82.2	5	1,350	58.7	6	1,620	70.5	3	810	35.2
ADA, SP 20mm	24	0.80	4,800	115,200	46.1	2,880	69,120	27.6	3,984	95,616	38.2	2,151	51,624	20.6	1,200	28,800	11.5
155mm Howitzer	72	99.62	203	14,616	728.0	207	14,904	742.4	146	10,512	523.6	153	11,016	548.7	166	11,952	595.3
prop chg		31.95	3,150	25,200	402.6	1,890	15,120	241.5	2,615	20,916	33.1	1,412	11,298	180.5	788	6,300	100.6
40mm M203	1,146	0.75	32	36,672	13.8	19	21,774	8.2	27	30,942	11.6	15	17,190	6.4	8	9,168	3.4
Launcher, 66mm, M202	60	8.75	16	960	4.2	10	600	2.6	14	840	3.7	7	420	1.8	4	240	1.1
Launcher TOW	60	87.00	9	540	23.5	10	600	26.1	7	420	18.3	8	480	20.9	4	240	10.4
MG 50 Cal	1,087	0.40	263	285,881	56.5	159	172,833	34.1	219	238,053	47.0	120	130,440	25.8	67	72,829	14.4
MG 7.62mm acft	60	0.09	840	50,400	2.3	509	30,540	1.4	700	42,000	2.0	382	22,920	1.1	213	12,780	0.6
MG 7.62mm fixed	588	0.09	649	381,612	17.7	393	231,084	10.7	541	318,108	14.8	295	173,460	8.1	164	96,432	4.5
MG 7.62 fl flex	685	0.09	649	444,565	20.7	393	269,205	12.5	541	370,585	17.2	295	202,075	9.4	164	112,340	5.2
SAW 5.56mm ¹	690	0.09	243	167,670	7.5	147	101,430	4.6	202	139,380	6.3	110	75,900	3.4	61	42,090	1.9
4.2in mortar	66	40.00	163	10,758	215.2	99	6,534	130.7	136	8,976	179.5	74	4,884	97.7	41	2,706	54.1
MG 7.62 RH feed	370	0.09	840	310,800	14.5	509	188,330	8.8	700	259,000	12.0	382	141,340	6.6	213	78,810	3.7
M16 A1 rifle	13,705	0.04	148	2,028,340	42.6	90	1,233,450	25.9	124	1,689,420	35.7	67	918,235	19.3	38	520,790	10.9
90mm recoil, rfl	24	27.50	19	456	6.3	11	264	3.6	15	360	5.0	8	192	2.6	5	120	1.7
SMG 5.56mm ¹	1,620	0.09	153	247,860	11.2	92	149,040	6.7	127	205,740	9.3	69	111,780	5.0	38	61,560	2.8
Tank M1 ¹	290	68.49	37	10,730	367.4	22	6,380	218.5	31	8,990	307.9	16	4,640	158.9	9	2,160	89.4
SMG 45cal	288	0.06	44	12,672	0.4	27	7,776	0.2	37	10,656	0.3	20	5,760	0.2	11	3,168	0.1
Dragon	180	67.00	3	540	18.1	4	720	24.1	2	360	12.1	3	540	18.1	1	180	6.0
MLRS ¹	9	872.57	99	891	388.7	98	882	384.8	75	675	294.5	76	684	298.4	67	603	263.1
total				2,795.8			2,299.9			2,213.0			1,737.8			1,342.4	

Light Inf Div (77000L000)

ADA 20mm towed	18	0.80	4,800	86,400	34.6	2,880	51,840	20.7	3,984	71,712	28.7	2,151	38,718	15.5	1,200	21,600	8.6
AH-1S Hel TOW	29	87.00	12	348	15.1	13	377	16.4	9	261	11.4	10	290	12.6	5	145	6.3
Hel: 20mm	29	0.80	3,000	87,000	34.8	1,800	52,200	20.9	2,490	72,210	28.9	1,345	39,005	15.6	750	21,750	8.7
2.75 rocket	58	11.83	42	2,436	14.4	25	1,450	8.6	35	2,030	12.0	19	1,102	6.5	11	638	3.8
105mm How rds	54	60.00	423	22,842	685.3	467	25,218	756.5	376	20,304	609.1	381	20,574	617.2	210	11,340	340.2
Fuzes	392	444	23,984	47.0	490	26,479	51.9	395	27	22,437	41.8	400	21,603	648.0	221	11,907	23.3
40mm M203	831	0.75	32	26,592	10.0	19	15,789	5.9	14	1,134	5.0	7	567	4.7	4	324	2.5
Launcher 66mm, M202	81	8.75	16	1,296	5.7	10	810	3.5	14	1,134	5.0	7	567	2.5	4	324	1.4
Launcher TOW	44	87.00	9	396	17.2	10	440	19.1	7	308	13.4	8	352	15.3	4	176	7.7
MG .50 Cal	17	0.40	263	4,471	0.9	159	2,703	0.5	219	3,723	0.7	120	2,040	0.4	67	1,139	0.2
MG 7.62mm acct	104	0.09	840	87,360	4.1	509	52,936	2.5	700	72,800	3.4	382	39,728	1.8	213	22,152	1.0
MG 7.62mm 6-btl	2	0.09	6,000	12,000	0.5	3,600	7,200	0.3	4,980	9,960	0.4	2,698	5,396	0.2	1,500	3,000	0.1
MG 7.62 lt flex	465	0.09	649	301,785	14.0	393	182,745	8.5	541	251,565	11.7	295	137,175	6.4	164	76,260	3.5
MG 5.56mm M249	33	0.09	243	112,995	5.3	147	68,355	3.2	202	93,330	4.4	110	51,150	2.4	61	28,365	1.3
60mm mortar ²	54	7.00	145	7,830	27.4	88	4,752	16.6	121	6,534	22.9	66	3,564	12.5	37	1,998	7.0
81mm mortar	36	17.32	145	5,220	45.2	88	3,168	27.4	121	4,356	37.7	66	2,376	20.6	37	1,332	11.5
M16 Al rifle	9,587	0.04	148	1,418,876	29.8	90	862,830	18.1	124	1,188,788	25.0	67	642,329	13.5	38	364,306	7.7
Dragon	162	67.00	3	486	16.3	4	648	21.7	2	324	10.9	3	486	16.3	1	162	5.4
					1,007.5			1,002.5			875.66			1,412.0			440.39

FOOTNOTES:

- ¹ Ammunition expenditure rates for new items based on scaling factor from theater-level rates.
² Ammunition expenditure rates are the same as 81-mm mortar rates.

Table 2-17. Daily Artillery Ammunition Requirements—Rounds Per Weapon and STON

Type of operation	Level of operation	First day		Succeeding days ¹		Protracted period ²	
		Rounds	STON ³	Rounds	STON	Rounds	STON
Part A. 105-mm Howitzer							
Covering Force	1-Heavy	491	16.8	511	17.5	198	6.8
	2-Moderate	319	10.9	332	11.4	129	4.4
	3-Light	172	5.9	179	6.1	69	2.4
Defense of Position	1-Heavy	423	14.5	467	16.0	222	7.6
	2-Moderate	275	9.4	304	10.4	144	4.9
	3-Light	148	5.1	163	5.6	78	2.7
Attack of Position	1-Heavy	376	12.9	381	13.0	210	7.2
	2-Moderate	244	8.4	248	8.5	137	4.7
	3-Light	132	4.5	133	4.6	74	2.5
Part B. 155-mm Howitzer (Divisional)							
Covering Force	1-Heavy	254	17.2	274	18.6	174	11.8
	2-Moderate	165	11.2	178	12.1	113	7.7
	3-Light	89	6.0	96	6.5	61	4.1
Defense of Position	1-Heavy	203	13.8	207	14.0	183	12.4
	2-Moderate	132	9.0	135	9.2	119	8.1
	3-Light	71	4.8	72	4.9	64	4.3
Attack of Position	1-Heavy	146	9.9	153	10.4	140	9.5
	2-Moderate	95	6.4	99	6.7	91	6.2
	3-Light	51	3.5	54	3.7	49	3.3
Part C. 155-mm Howitzer (Nondivisional)							
Covering Force	1-Heavy	309	21.0	333	22.6	212	14.4
	2-Moderate	201	13.6	216	14.7	138	9.4
	3-Light	108	7.3	117	7.9	74	5.0
Defense of Position	1-Heavy	227	15.4	235	15.9	199	13.5
	2-Moderate	148	10.0	153	10.4	129	8.8
	3-Light	79	5.3	82	5.6	70	4.7
Attack of Position	1-Heavy	176	11.9	183	12.4	170	11.5
	2-Moderate	114	7.7	119	8.1	111	7.5
	3-Light	62	4.2	64	4.3	60	4.1
Part D. 8-in Howitzer (Divisional)							
Covering Force	1-Heavy	360	47.3	361	47.4	207	27.2
	2-Moderate	234	30.7	235	30.8	135	17.7
	3-Light	126	16.5	126	16.5	73	9.6
Defense of Position	1-Heavy	177	23.2	164	21.5	90	11.8
	2-Moderate	115	15.1	107	14.0	59	7.7
	3-Light	62	8.1	57	7.5	32	4.2
Attack of Position	1-Heavy	130	17.1	127	16.7	56	7.4
	2-Moderate	85	11.1	83	10.9	36	4.7
	3-Light	46	6.0	45	5.9	20	2.6

Part E. 8-in Howitzer (Nondivisional)									
Covering Force	1-Heavy	446	58.5	448	58.8	257	33.7		
	2-Moderate	290	38.1	291	38.2	167	21.9		
	3-Light	156	20.5	157	20.6	90	11.8		
Defense of Position	1-Heavy	177	23.3	164	21.5	90	11.8		
	2-Moderate	115	15.1	107	14.0	59	7.7		
	3-Light	62	8.1	57	7.5	32	4.2		
Attack of Position	1-Heavy	161	21.1	158	20.7	69	9.1		
	2-Moderate	105	13.8	103	13.5	45	5.9		
	3-Light	56	7.4	55	7.3	24	3.2		
Part F. 175-mm Gun (Nondivisional)									
Covering Force	1-Heavy	372	51.2	481	66.2	221	30.4		
	2-Moderate	242	33.3	313	43.1	144	19.8		
	3-Light	130	17.9	168	23.1	74	10.2		
Defense of Position	1-Heavy	166	22.9	180	24.8	64	8.8		
	2-Moderate	108	14.9	117	16.1	42	5.8		
	3-Light	58	8.0	63	8.7	22	3.0		
Attack of Position	1-Heavy	113	15.6	113	15.6	53	7.3		
	2-Moderate	74	10.2	74	10.2	35	4.8		
	3-Light	40	5.5	40	5.5	19	2.6		

FOOTNOTES:

¹Succeeding days are the second, third, and fourth days of the battle. For the fifth-day ammunition requirements, take the average of the succeeding-days' rate and the protracted rate.

²Protracted period refers to days 6 through 15. For estimating ammunition requirements for periods greater than 15 days, use rates provided in SB 38-26, as amended by DA message 262258Z Aug 76, subject: FY 77 USAREUR Ammunition-Theater Combat Rates.

³STON are computed on total weight per complete round: 105-mm—68.5 lb/rd

155-mm—135.7 lb/rd

175-mm—275.4 lb/rd

8-mm—262.5 lb/rd

Table 2-18. Daily Antitank Guided Missile Requirements - Rounds Per Weapon/Launcher and STON

Type of operation	Level of operation	First day		Succeeding days ¹		Protracted period ²	
		Missiles	STON ³	Missiles	STON	Missiles	STON
Part A. TOW (Mounted/Unmounted) Ground System							
Covering Force	1-Heavy	9	.39	10	.44	4	.17
	2-Moderate	5	.22	6	.26	2	.08
	3-Light	2	.08	3	.13	1	.04
Defense of Position	1-Heavy	9	.39	10	.44	4	.17
	2-Moderate	6	.26	7	.30	2	.08
	3-Light	4	.17	4	.17	1	.04
Attack of Position	1-Heavy	7	.30	8	.34	4	.17
	2-Moderate	4	.17	5	.22	2	.08
	3-Light	2	.08	3	.13	1	.04
Recon and Security	1-Heavy	5	.22	6	.26	4	.17
	2-Moderate	3	.13	4	.17	2	.08
	3-Light	2	.08	2	.08	1	.04
Part B. TOW Aerial System							
Covering Force	1-Heavy	11	.48	12	.52	1	.22
	2-Moderate	6	.26	7	.30	3	.13
	3-Light	2	.08	3	.13	1	.04
Defense of Position	1-Heavy	12	.52	13	.57	5	.22
	2-Moderate	7	.30	8	.34	3	.13
	3-Light	3	.13	4	.17	1	.04
Attack of Position	1-Heavy	9	.39	10	.44	5	.22
	2-Moderate	5	.22	6	.26	3	.13
	3-Light	2	.08	3	.13	1	.04
Recon and Security	1-Heavy	7	.30	8	.34	5	.22
	2-Moderate	4	.17	5	.22	3	.13
	3-Light	2	.08	2	.08	1	.04
Part C. Dragon							
Covering Force	1-Heavy	2	.06	2	.06	1	.03
	2-Moderate	2	.06	2	.06	1	.03
	3-Light	1	.03	1	.03	1	.03
Defense of Position	1-Heavy	3	.10	4	.13	1	.03
	2-Moderate	2	.06	2	.06	1	.03
	3-Light	1	.03	1	.03	1	.03
Attack of Position	1-Heavy	2	.06	3	.10	1	.03
	2-Moderate	1	.03	2	.06	1	.03
	3-Light	1	.03	1	.03	1	.03
Recon and Security	1-Heavy	2	.06	2	.06	1	.03
	2-Moderate	1	.03	1	.03	1	.03
	3-Light	1	.03	1	.03	1	.03

		Part D. Shillelagh					
Covering Force	1-Heavy	7	.39	8	.45	3	.17
	2-Moderate	3	.17	4	.22	2	.11
	3-Light	2	.11	2	.11	1	.06
Defense of Position	1-Heavy	7	.39	9	.50	3	.17
	2-Moderate	5	.28	6	.34	2	.11
	3-Light	3	.17	3	.17	1	.06
Attack of Position	1-Heavy	6	.34	7	.39	3	.17
	2-Moderate	3	.17	4	.22	2	.11
	3-Light	2	.11	3	.17	1	.06
Recon and Security	1-Heavy	4	.22	5	.28	3	.17
	2-Moderate	2	.11	3	.17	2	.11
	3-Light	1	.06	1	.06	1	.06

FOOTNOTES:

¹Succeeding days are the second, third, and fourth days of the battle. For the fifth-day ammunition requirements, take the average of the succeeding-days' rate and the protracted rate.

²Protracted period refers to days 6 through 15. For estimating ammunition requirements for periods greater than 15 days, use rates provided in SB 38-26, as amended by DA message 262258Z Aug 76, subject: FY 77 USAREUR Ammunition-Theater Combat Rates.

³STON are computed with packaged weight per missile: Dragon — 67.0 lb/msl

Shillelagh — 112.0 lb/msl

Divisions

Weapon	Level of Operation	Defense of Position				Attack of Position				Protracted Period	
		First Day		Succeeding Days		First Day		Succeeding Days		Rounds	STON
		Rounds	STON	Rounds	STON	Rounds	STON	Rounds	STON		
1. MG 7.62 M18	Heavy Moderate Light	6000 4260 2580	0.300 0.213 0.129	3600 2556 1548	0.180 0.128 0.077	4980 3536 2141	0.249 0.177 0.107	2689 1909 1156	0.134 0.095 0.058	1500 1065 645	0.074 0.050 0.030
2. HEL ATK AH-1S 20MM GUN	Heavy Moderate Light	3000 2130 1290	1.200 0.852 0.516	1800 1278 774	0.720 0.511 0.310	2490 1768 1071	0.996 0.707 0.428	1345 955 578	0.538 0.382 0.231	750 533 323	0.300 0.217 0.122
3. HEL ATK AH-1S 7.62 MG	Heavy Moderate Light	840 596 361	0.042 0.030 0.018	509 361 219	0.025 0.018 0.011	700 497 301	0.035 0.025 0.015	382 271 164	0.019 0.014 0.008	213 151 92	0.011 0.008 0.000
4. HEL ATK AH-1S TOW	Heavy Moderate Light	12 9 5	0.593 0.445 0.247	13 9 6	0.642 0.445 0.296	9 6 4	0.445 0.296 0.198	10 7 4	0.494 0.346 0.198	5 4 2	0.24 0.199 0.099
5. ARAAV M551 SHILLELAGH	Heavy Moderate Light	7 5 3	0.392 0.280 0.168	9 6 4	0.504 0.336 0.224	6 4 3	0.336 0.224 0.168	7 5 3	0.392 0.280 0.168	3 2 1	0.166 0.111 0.056
6. ARAAV M551 152MM CTG	Heavy Moderate Light	9 6 4	0.270 0.180 0.120	5 4 2	0.150 0.120 0.060	7 5 3	0.210 0.150 0.090	4 3 2	0.120 0.090 0.060	2 1 1	0.060 0.030 0.030
7. ADA SP 20MM M163	Heavy Moderate Light	4800 3408 2064	2.400 1.704 1.032	2880 2045 1238	1.440 1.023 0.619	3984 2829 1713	1.992 1.415 0.857	2151 1527 925	1.076 0.764 0.463	1200 852 516	0.600 0.424 0.257
8. HOW SP 105MM M108	Heavy Moderate Light	423 300 182	14.488 10.275 6.234	467 332 201	15.995 11.371 6.884	376 267 162	12.878 9.145 5.549	381 271 164	13.049 9.282 5.617	210 149 90	7.193 5.103 3.089
9. HOW SP 155MM M109	Heavy Moderate Light	203 144 87	13.774 9.770 5.903	207 147 89	14.045 9.974 6.039	146 104 63	9.906 7.056 4.275	153 109 66	10.381 7.396 4.478	166 118 71	11.266 8.006 4.811
10. HOW SP 8" M110	Heavy Moderate Light	177 126 76	23.231 16.538 9.975	164 116 71	21.525 15.225 9.319	130 92 56	17.063 12.075 7.350	127 90 55	16.669 11.813 7.219	118 84 51	15.488 11.025 6.699
11. LCHR GREN 40MM M203	Heavy Moderate Light	32 23 14	0.017 0.013 0.008	19 13 8	0.010 0.007 0.004	27 19 12	0.015 0.010 0.007	15 11 6	0.008 0.006 0.003	8 6 3	0.004 0.003 0.000
12. LCHR GM DRAGON	Heavy Moderate Light	3 2 1	0.109 0.073 0.036	4 3 2	0.145 0.109 0.073	2 1 1	0.073 0.036 0.036	3 2 1	0.109 0.073 0.036	1 1 0	0.034 0.030 0.000
13. HEL ATK AH-1S 2.75" RKT	Heavy Moderate Light	42 30 18	0.693 0.495 0.297	25 18 11	0.413 0.297 0.182	35 25 15	0.578 0.413 0.248	19 13 8	0.014 0.215 0.132	11 8 5	0.187 0.133 0.083
14. LCHR RKT 66MM M202	Heavy Moderate Light	16 11 7	0.070 0.048 0.031	10 7 4	0.044 0.031 0.018	14 10 6	0.061 0.044 0.026	7 5 3	0.031 0.022 0.013	4 3 2	0.111 0.114 0.000

15. LCHR GM TOW	Heavy	9	0.445	10	0.494	7	0.046	8	0.395	4	0.198
	Moderate	6	0.296	7	0.346	5	0.247	6	0.296	3	0.148
	Light	4	0.198	4	0.198	3	0.148	3	0.148	2	0.099
16. MG .50 CAL. M2	Heavy	263	0.059	159	0.036	219	0.048	120	0.027	67	0.015
	Moderate	187	0.042	113	0.025	155	0.035	85	0.019	48	0.110
	Light	113	0.025	68	0.015	94	0.021	52	0.012	29	0.007
17. MG 7.62 6-BARREL	Heavy	6000	0.300	3600	0.180	4980	0.248	2689	0.134	1500	0.075
	Moderate	4260	0.213	2556	0.128	3536	0.177	1909	0.095	1065	0.053
	Light	2580	0.129	1548	0.077	2141	0.107	1156	0.058	645	0.032
18. MORTAR 81MM	Heavy	145	1.256	88	0.762	121	1.048	66	0.572	37	0.320
	Moderate	103	0.892	62	0.537	86	0.745	47	0.407	26	0.225
	Light	62	0.537	38	0.329	52	0.450	28	0.242	16	0.139
19. MORTAR 4.2" M30	Heavy	163	3.260	99	1.980	136	2.720	74	1.480	41	0.820
	Moderate	116	2.320	70	0.400	97	1.940	53	0.060	29	0.580
	Light	70	1.400	43	0.860	58	1.160	32	0.640	18	0.760
20. RIFLE 5.56MM M16A1	Heavy	148	0.003	90	0.002	124	0.002	67	0.001	38	0.001
	Moderate	105	0.002	64	0.001	88	0.001	48	0.001	27	0.001
	Light	64	0.001	39	0.001	53	0.001	29	0.001	16	0.000
21. RIFLE RECOIL 90MM M67	Heavy	14	0.193	9	0.124	12	0.165	6	0.083	4	0.055
	Moderate	10	0.138	6	0.083	9	0.124	4	0.055	3	0.041
	Light	6	0.083	4	0.055	5	0.069	3	0.041	2	0.028
22. SUB MG CAL. 45 M3	Heavy	44	0.001	27	0.001	37	0.001	20	0.001	11	0.000
	Moderate	31	0.001	19	0.001	26	0.001	14	0.000	8	0.000
	Light	19	0.001	12	0.000	16	0.000	9	0.000	5	0.000
23. TANK, M60A3 105MM	Heavy	78	2.808	47	0.692	65	2.340	35	0.260	20	0.720
	Moderate	55	1.980	33	1.188	46	1.656	25	0.900	14	0.504
	Light	34	1.224	20	0.720	28	1.008	15	0.540	9	0.324
24. CFV M3 25MM CTR	Heavy	277	0.259	216	0.202	225	0.210	166	0.155	98	0.082
	Moderate	197	0.184	153	0.143	160	0.150	118	0.110	70	0.065
	Light	119	0.111	93	0.087	97	0.091	71	0.066	42	0.039
25. CFV M3 TOW	Heavy	9	0.445	10	0.494	7	0.046	8	0.395	4	1.198
	Moderate	6	0.296	7	0.346	5	0.247	6	0.296	3	0.148
	Light	4	0.198	4	0.198	3	0.148	3	0.099	2	0.099
26. ITV M901 TOW	Heavy	13	0.642	15	0.741	10	0.494	12	0.593	6	0.296
	Moderate	9	0.445	11	0.543	7	0.346	9	0.445	4	0.198
	Light	6	0.296	6	0.296	4	0.198	5	0.247	3	0.148
27. IFV 25MM CTG	Heavy	214	0.200	167	0.156	174	0.163	129	0.121	76	0.071
	Moderate	152	0.142	119	0.111	124	0.116	92	0.086	54	0.050
	Light	92	0.086	72	0.067	75	0.070	55	0.051	33	0.031
28. IFV TOW	Heavy	6	0.296	7	0.346	5	0.247	6	0.296	3	0.148
	Moderate	4	0.198	5	0.247	4	0.198	4	0.198	2	0.099
	Light	3	0.148	3	0.148	2	0.099	3	0.148	1	0.049
29. HEL ATK AH-64 (30 MM)	Heavy	770	0.527	602	0.412	628	0.430	463	0.317	274	0.188
	Moderate	547	0.375	427	0.292	446	0.306	329	0.225	195	0.134
	Light	331	0.227	259	0.177	270	0.185	199	0.136	118	0.081
30. HEL ATK AH-64 (HELLFIRE)	Heavy	16	1.554	17	1.652	12	1.166	13	1.263	7	0.680
	Moderate	11	1.069	12	1.166	9	0.874	9	0.847	5	0.486
	Light	7	0.680	7	0.680	5	0.486	6	0.583	3	0.291

Table 2-19. Ammunition in Rounds Per Weapon Per Day and STON Per Day by Level of Operation for All Types of Divisions—(Cont'd)

Weapon	Level of Operation	Defense of Position				Attack of Position			
		First Day Rounds	STON	Succeeding Days Rounds	STON	First Day Rounds	STON	Succeeding Days Rounds	STON
31. IFV M2 25MM CTG	Heavy	214	0.200	167	0.156	174	0.163	129	0.121
	Moderate	152	0.142	119	0.111	124	0.116	92	0.086
	Light	92	0.086	72	0.067	75	0.070	55	0.051
32. IFV M2 TOW	Heavy	6	0.296	7	0.346	5	0.247	6	0.296
	Moderate	4	0.198	5	0.247	4	0.198	4	0.198
	Light	3	0.148	3	0.148	2	0.099	3	0.148
33. MLRS	Heavy	99	43.199	98	42.762	75	32.826	76	33.163
	Moderate	70	30.545	70	30.545	53	23.127	54	23.563
	Light	43	18.763	42	18.327	32	13.963	33	14.400
34. MG 5.56MM (SAW)	Heavy	243	0.005	147	0.003	202	0.004	110	0.002
	Moderate	173	0.003	104	0.002	143	0.003	78	0.002
	Light	104	0.002	63	0.001	87	0.002	47	0.001
35. TANK CBT M1 105MM	Heavy	37	1.332	22	0.792	31	1.116	16	0.576
	Moderate	26	0.936	16	0.576	22	0.792	11	0.396
	Light	16	0.576	9	0.324	13	0.468	7	0.252
		Protracted Period Rounds	STON						
		76	0.071						
		54	0.050						
		33	0.031						
		3	0.148						
		2	0.099						
		1	0.049						
		67	29.235						
		48	20.945						
		29	12.654						
		61	0.001						
		43	0.001						
		26	0.001						
		9	0.324						
		6	0.216						
		4	0.144						

2-13. BASIC LOAD. The basic load is that quantity of conventional ammunition that is authorized and required by each nation to be on hand within a unit at all times. It is expressed in rounds for ammunition items fired by weapons and in other units of measure for bulk allotment and other ammunition items (Table 2-20).

a. The size and makeup of the basic load is designed to meet the anticipated initial combat needs of a unit until normal resupply is accomplished. During wartime, the following factors influence composition of the basic load:

- (1) Nature of the enemy.
- (2) Type of mission.
- (3) Intensity of engagement.
- (4) Availability of resupply transportation.
- (5) Availability of ammunition.

The first three factors, largely enemy influenced, drive the RSR. As a goal, a combination of the production base, pipeline assets, and in-theater stockage should, as a minimum, provide the RSR. Unit basic loads, which are a relatively small stockpile of ammunition at the forward end of this pipeline, should represent a tradeoff considering available organic transportation, intensity of combat, and availability of adequate resupply.

b. In peacetime, the size and makeup of the basic load tend to become static and are primarily for administrative control of ammunition issued to units. In wartime, the basic load is a dynamic rather than static quantity. For example, a fluid situation with a high-intensity air threat, such as that anticipated early in the war, would probably dictate a large basic load to meet unforeseen contingencies and provide uninterrupted operations. On the other hand, a combat situation of low intensity would tend to reduce basic loads.

c. Basis of issue for light antitank weapons (LAW) is as follows:

INFANTRY DIVISION (LIGHT)

DIV HHC	18
MP CO	18
SIG BN	54
ADA BN	96
ENG BN	126
MI BN	60
BDE HHC (3)	54
INF BN (9)	2,268
DIVARTY HHB	36
ARTY BN HHC (4)	144
ARTY BTRY (12)	540
CAB	324
DISCOM	180
	<hr/>
	3,918

MECH (HVVY)

(3) BDE HHC	54
(5) INF BN	780
(5) AR BN	780
DISCOM	144
HHB DIVARTY	18
(3) 155 BN	306
(1) MLRS	126

SEP UNITS

SIG BN	48
ADA BN	48
MP CO	30
HHC DIV	18
ENG BN	186
CEWI BN	48
CHEM CO	12
CAV SQDN	60

CBA

HHT	12
GEN SPT AVN CO	12
CBT SPT AVN CO	12
CAV SQDN	170
ATK HEL BN	88

Table 2-20. Ammunition Basic Load Guide

LIN	DDAC/NSN	WPN DESCRIPTION	AMMO DESCRIP	QTY PER WPN	UI	WT PER ITEM	QTY CARR ON PERS	QTY CARR ON VEH	QTY CARR BULK	QTY PER CONT	CU PER CONT	WT PER CONT
A30171	1330G90000000	MOHAWK OV-1A	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30171	1330G93000000	MOHAWK OV-1A	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30171	1330G94000000	MOHAWK OV-1A	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30171	1330G94500000	MOHAWK OV-1A	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30171	1330G95000000	MOHAWK OV-1A	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30171	1330G95500000	MOHAWK OV-1A	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30171	1370L49500000	MOHAWK OV-1A	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.9
A30221	1330G90000000	MOHAWK OV-1B	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30221	1330G93000000	MOHAWK OV-1B	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30221	1330G94000000	MOHAWK OV-1B	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30221	1330G94500000	MOHAWK OV-1B	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30221	1330G95000000	MOHAWK OV-1B	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30221	1330G95500000	MOHAWK OV-1B	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30221	1370L49500000	MOHAWK OV-1B	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.9
A30271	1330G90000000	MOHAWK OV-1C	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30271	1330G93000000	MOHAWK OV-1C	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30271	1330G94000000	MOHAWK OV-1C	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30271	1330G94500000	MOHAWK OV-1C	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30271	1330G95000000	MOHAWK OV-1C	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30271	1370L95500000	MOHAWK OV-1C	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30271	1370L49500000	MOHAWK OV-1C	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.9
A30296	1330G90000000	MOHAWK OV-1D	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30296	1330G93000000	MOHAWK OV-1D	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30296	1330G94000000	MOHAWK OV-1D	GREN HAND SMK DR	2	EA	2.13	0	1	0	16	1.1	34
A30296	1330G94500000	MOHAWK OV-1D	GREN HAND SMK YE	2	EA	2.13	0	1	0	16	1.1	34
A30296	1330G95000000	MOHAWK OV-1D	GREN HAND SMK RD	2	EA	2.13	0	1	0	16	1.1	34
A30296	1330G95500000	MOHAWK OV-1D	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30296	1370L49500000	MOHAWK OV-1D	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30585	1330G90000000	UTE RU-21D	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30585	1330G93000000	UTE RU-21D	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30585	1330G94000000	UTE RU-21D	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30585	1330G94500000	UTE RU-21D	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30585	1330G95000000	UTE RU-21D	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30585	1330G95500000	UTE RU-21D	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30585	1370L49500000	UTE RU-21D	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30621	1330G90000000	OTTER U-1A	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30621	1330G93000000	OTTER U-1A	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30621	1330G94000000	OTTER U-1A	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30621	1330G94500000	OTTER U-1A	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30621	1330G95000000	OTTER U-1A	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30621	1330G95500000	OTTER U-1A	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30621	1370L49500000	OTTER U-1A	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7

A30694	1330G9000000	UTE RU-21A	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30694	1330G9300000	UTE RU-21A	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30694	1330G9400000	UTE RU-21A	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30694	1330G9450000	UTE RU-21A	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30694	1330G9500000	UTE RU-21A	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30694	1330G9550000	UTE RU-21A	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30694	1370L4950000	UTE RU-21A	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30741	1330G9000000	SEMINOLE U-3D	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30741	1330G9300000	SEMINOLE U-3D	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30741	1330G9400000	SEMINOLE U-3D	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	.9	34
A30741	1330G9450000	SEMINOLE U-3D	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	.9	34
A30741	1330G9500000	SEMINOLE U-3D	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	.9	34
A30741	1330G9550000	SEMINOLE U-3D	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	.9	34
A30741	1370L4950000	SEMINOLE U-3D	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30762	1330G9000000	UTE RU-21B	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30762	1330G9300000	UTE RU-21B	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30762	1330G9400000	UTE RU-21B	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30762	1330G9450000	UTE RU-21B	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30762	1330G9500000	UTE RU-21B	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30762	1330G9550000	UTE RU-21B	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30762	1370L4950000	UTE RU-21B	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30821	1330G9000000	SEMINOLE U-8F	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30821	1330G9300000	SEMINOLE U-8F	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30821	1330G9400000	SEMINOLE U-8F	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30821	1330G9450000	SEMINOLE U-8F	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30821	1330G9500000	SEMINOLE U-8F	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30821	1330G9550000	SEMINOLE U-8F	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30821	1370L4950000	SEMINOLE U-8F	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30831	1330G9000000	SEMINOLE U-8G	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30831	1330G9300000	SEMINOLE U-8G	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30831	1330G9400000	SEMINOLE U-8G	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30831	1330G9450000	SEMINOLE U-8G	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30831	1330G9500000	SEMINOLE U-8G	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30831	1330G9550000	SEMINOLE U-8G	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30831	1370L4950000	SEMINOLE U-8G	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30843	1330G9000000	UTE U-21C	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.9	47
A30843	1330G9300000	UTE U-21C	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	1.1	41
A30843	1330G9400000	UTE U-21C	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30843	1330G9450000	UTE U-21C	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30843	1330G9500000	UTE U-21C	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30843	1330G9550000	UTE U-21C	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30843	1370L4950000	UTE U-21C	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30946	1330G9000000	UTE U-21A	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30946	1330G9300000	UTE U-21A	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30946	1330G9400000	UTE U-21A	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30946	1330G9450000	UTE U-21A	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30946	1330G9500000	UTE U-21A	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34

Table 2-20. Ammunition Basic Load Guide — (Cont'd)

LN	DODAC/MSN	WPN DESCRIPTION	AMMO DESCRIP	QTY PER WPN	UI	WT PER ITEM	QTY CARR ON PERS	QTY CARR ON VEH	QTY CARR BULK	QTY PER CONT	CU PER CONT	WT PER CONT
A30946	1330G95500000	UTE U-21A	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30946	1370L49500000	UTE U-21A	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30951	1330G90000000	UTE U-21F	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30951	1330G93000000	UTE U-21F	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30951	1330G94000000	UTE U-21F	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30951	1330G94500000	UTE U-21F	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30951	1330G95000000	UTE U-21F	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30951	1330G95500000	UTE U-21F	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30951	1370L49500000	UTE U-21F	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A30953	1330G90000000	UTE U-21G	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
A30953	1330G93000000	UTE U-21G	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
A30953	1330G94000000	UTE U-21G	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
A30953	1330G94500000	UTE U-21G	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
A30953	1330G95000000	UTE U-21G	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
A30953	1330G95500000	UTE U-21G	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
A30953	1370L49500000	UTE U-21G	FLARE SUR TRIP	10	EA	1.94	0	10	0	32	1.9	30.7
A89820	1305A16500000	ARM POD M18	FLARE SUR TRIP	6000	RD	0.08	0	1500	4500	1500	1.3	122
A89992	1305A65300000	ARM SUB HEL M35	20 MM	3000	RD	0.92	0	1000	2000	100	1.3	99
A90118	1305A16500000	ARM SUB HEL M23	7.62 MM	4200	RD	0.08	0	1200	3000	1500	1.3	122
A90123	1305A16500000	ARM SUB HEL M24	7.62 MM	4200	RD	0.08	0	1200	3000	1500	1.3	122
A90155	1305A16500000	ARM SUB HEL M27	7.62 MM	4500	RD	0.08	0	1500	3000	1500	1.3	122
A90344	1305A16500000	ARM SUB HEL M41	7.62 MM	4500	RD	0.08	0	1200	3000	1500	1.3	122
A90427	1305A16500000	ARM SUB HEL M21	7.62 MM	21000	RD	0.08	0	6000	15000	1500	1.3	122
A90427	1340H48700000	ARM SUB HEL M21	2.75 IN HEAT	1	RD	35.25	0	0	0	4	3.1	141
A90427	1340H48800000	ARM SUB HEL M21	2.75 IN HE VT FZ	1	RD	40.50	0	0	0	4	3.5	162
A90427	1340H49000000	ARM SUB HEL M21	2.75 IN HE PD FZ	26	RD	31.04	0	9	17	4	3.6	131
A90427	1340H51900000	ARM SUB HEL M21	2.75 WP	3	RD	31.04	0	1	2	4	3.6	148
A90427	1340H53400000	ARM SUB HEL M21	2.75 IN HE FZ PD	11	RD	39.84	0	4	7	4	3.6	160
A90437	1305A16500000	ARM SUB HEL M28	7.62 MM	4000	RD	0.08	0	1000	3000	1500	1.3	122
A90437	1310B47000000	ARM SUB HEL M28	40 MM	321	RD	1.06	0	107	214	50	1.2	60
A90461	1310B47000000	ARM SUB HEL M5	40 MM	600	RD	1.06	0	300	300	50	1.2	60
A90871	1375008853480	ARMT HELI GM M22	EXPLOSIVE BOLTS	0	EA	0.42	0	0	0	12	.3	5
A90871	1410009876432	ARMT HELI GM M22	ROCKET SS11	0	EA	110.00	0	0	0	1	8.7	110
A93125	1305A13100000	ARAV M551	7.62 MM—WG	3000	RD	0.09	0	3000	0	800	.9	80
A93125	1305A57600000	ARAV M551	.50 CAL AP/PI/PI-T	1000	RD	0.38	0	1000	0	200	.9	90
A93125	1320D38100000	ARAV M551	152 MM HEAT MP	26	RD	98.00	0	18	8	1	3.3	98
A93125	1320D39000000	ARAV M551	CANISTER APER	4	RD	97.00	0	2	2	1	4.0	97
A93125	1330G90000000	ARAV M551	GREN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
A93125	1330Q81500000	ARAV M551	GREN SMK SCREENING	16	EA	5.8	0	8	8	5	0.6	32
A93125	1345K14300000	ARAV M551	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
A93125	1370L49500000	ARAV M551	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
A93125	1410001508932	ARAV M551	SHILLELAGH GM51C	20	RD	112.00	0	10	10	1	3.3	112
C76335	1305A13100000	CAV FIGHTING VEHICLE	7.62 COAXIAL	6210	RD	0.09	0	4610	1600	800	.9	80

C76335	1305A13100000	CAV FIGHTING VEHICLE	7.62 LIGHT	4400	RD	0.09	0	3200	1200	800	.9	80
C76335	1305A06800000	CAV FIGHTING VEHICLE	M16A1	840	RD	0.03	0	600	240	1680	.9	67.2
C76335	1305A47500000	CAV FIGHTING VEHICLE	.45 CAL	21	RD	0.05	0	21	0	2000	.9	102
C76335	1410HB0100000	CAV FIGHTING VEHICLE	TOW MSL	18	RD	80.0	0	12	6	1	4.9	89
C76335	1305A97400000	CAV FIGHTING VEHICLE	25 MM APDS-T	500	RD	1.87	0	425	75	30	0.6	56.1
C76335	1305A97500000	CAV FIGHTING VEHICLE	25 MM HEL-T	1510	RD	1.87	0	1280	230	30	0.6	56.1
C76335	1427DR0100000	CAV FIGHTING VEHICLE	DRAGON	6	RD	67.0	0	0	6	1	7.0	67
C76335	1340H55700000	CAV FIGHTING VEHICLE	LAW-M72	3	RD	7.8	0	3	0	15	8.3	150
C76335	1330G81500000	CAV FIGHTING VEHICLE	GRENADE, SMK	24	RD	5.8	0	16	8	5	0.6	32
C76335	1330G88100000	CAV FIGHTING VEHICLE	GRENADE, FRAG	10	RD	1.7	0	10	0	30	1.6	51
D06124	1305A13100000	CARR ARMED LT M706	7.62 MM- MG	3000	RD	0.09	0	3000	0	800	.9	80
D10726	1305A57600000	CARR MORTAR M125	.50 CAL API/API-T	2100	EA	0.38	0	525	1575	200	.9	90
D10726	1330G88100000	CARR MORTAR M125	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
D10726	1330G90000000	CARR MORTAR M125	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
D10726	1345K14300000	CARR MORTAR M125	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
D10726	1370L49500000	CARR MORTAR M125	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
D10741	1305A57600000	CARR MORTAR M106	.50 CAL API/API-T	2500	RD	0.38	0	525	0	200	.9	90
D10741	1330G88100000	CARR MORTAR M106	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
D10741	1330G90000000	CARR MORTAR M106	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
D10741	1345K14300000	CARR MORTAR M106	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
D10741	1370L49500000	CARR MORTAR M106	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
D11049	1305A13100000	CARR CARGO M548	7.62 MM-MG	500	RD	0.09	0	500	0	800	.9	80
D11049	1305760000000	CARR CARGO M548	.50 CAL API/API-T	300	RD	0.38	0	300	0	200	.9	90
D11049	1330G90000000	CARR CARGO M548	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
D11049	1345K14300000	CARR CARGO M548	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
D11049	1370L49500000	CARR CARGO M548	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
D11401	1305A13100000	CARR CMD RECON	7.62 MM-MG	3400	RD	0.09	0	2600	880	800	.9	80
D11401	1305A57600000	CARR CMD RECON	.50 CAL API/API-T	1480	RD	0.38	0	1050	400	200	.9	90
D11401	1330G88100000	CARR CMD RECON	GREEN HAND FRAG	8	EA	1.07	0	8	0	30	1.6	51
D11401	1330G90000000	CARR CMD RECON	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
D11401	1345K14300000	CARR CMD RECON	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
D11401	1370L49500000	CARR CMD RECON	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
D11538	1330G88100000	CARR CMD M577	GREEN HAND FRAG	20	EA	1.70	0	20	0	30	1.6	51
D11538	1330G90000000	CARR CMD M577	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
D11538	1345K14300000	CARR CMD M577	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
D11538	1370L49500000	CARR CMD M577	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
D11681	1305A57600000	CARR GUIDED MI	50 CAL API/API-T	2100	EA	0.38	0	525	1575	200	.9	90
D11681	1330G88100000	CARR GUIDED MI	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
D11681	1330G90000000	CARR GUIDED MI	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
D11681	1345K14300000	CARR GUIDED MI	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
D11681	1370L49500000	CARR GUIDED MI	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
D12087	1305A57600000	APC M113	.50 CAL API/API-T	1995	RD	0.38	0	1995	0	200	.9	90
D12087	1330G88100000	APC M113	GREEN HAND FRAG	20	EA	1.70	0	20	0	30	1.6	51
D12087	1330G90000000	APC M113	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
D12087	1345K14300000	APC M113	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
D12087	1370L49500000	APC M113	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
E56578	1305A13100000	CMBT ENGR M728	7.62 MM-MG	3410	RD	0.09	0	3410	0	800	.9	80

Table 2-20. Ammunition Basic Load Guide — (Cont'd)

LIN	DODAC/NSN	WPN DESCRIPTION	AMMO DESCRIP	QTY PER WPN	UI	WT PER ITEM	QTY CARR ON PERS	QTY CARR ON VEH	QTY CARR BULK	QTY PER CONT	CU PER CONT	WT PER CONT
E56578	1305A58900000	CMBT ENGR M/728	.50 CAL AP/PI-T	735	RD	0.42	0	735	0	170	.9	76.5
E56578	1320D57000000	CMBT ENGR M/728	165 MM HEP FZ BD	60	RD	92.00	0	30	30	1	4.1	104
E56578	1330G88100000	CMBT ENGR M/728	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
E56578	1330G90000000	CMBT ENGR M/728	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
E56578	1345K14300000	CMBT ENGR M/728	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
E56578	1370L49500000	CMBT ENGR M/728	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
E56896	1410000871521	ANTI-ARMOR ITV	TOW MISSILE	12	EA	80.00	0	12	0	1	4.9	89
F91490	1375M02300000	DEMO SET EXPL E	CHARGE DEM 1-1/4	80	EA	1.25	0	0	80	30	.8	51
F91490	1375M02400000	DEMO SET EXPL E	CHARGE DEMO 2 LB	20	EA	2.0	0	0	20	20	1.0	54
F91490	1375M03200000	DEMO SET EXPL E	CHARGE DEMO 1 LB	50	EA	1.0	0	0	50	48	1.7	73.9
F91490	1375M13000000	DEMO SET EXPL E	CAP BLAST ELEC	50	EA	0.14	0	0	50	900	5.2	126
F91490	1375M13100000	DEMO SET EXPL E	CAP BLAST NONELE	50	EA	0.02	0	0	50	5000	2.3	82
F91490	1376M24100000	DEMO SET EXPL E	DESTRUCTOR EXPL	5	EA	1.56	0	0	5	50	2.4	80.5
F91490	1375M45600000	DEMO SET EXPL E	CORD DET PETN	500	EA	0.02	0	0	500	4000	2.4	80.5
F91490	1375M67000000	DEMO SET EXPL E	FUZE BLAST TIME	100	EA	0.02	0	0	100	4000	3.9	120
F91490	1375M76600000	DEMO SET EXPL E	IGNITER TIME BLST	50	EA	0.02	0	0	50	300	2.0	60
F91627	1375M02300000	DEMO SET EXPL NE	CHARGE DEM 1-1/4	80	EA	1.25	0	0	80	30	.8	51
F91627	1375M13100000	DEMO SET EXPL NE	CAP BLAST NONELE	50	EA	0.02	0	0	50	5000	2.3	82
F91627	1375M24100000	DEMO SET EXPL NE	DESTRUCTOR EXPL	2	EA	1.56	0	0	2	50	2.4	78
F91627	1375M45600000	DEMO SET EXPL NE	CORD DET PETN	200	EA	0.02	0	0	200	3000	2.5	80.5
F91627	1375M67000000	DEMO SET EXPL NE	FUZE BLAST TIME	100	EA	0.02	0	0	100	4000	3.9	120
F91627	1375M76600000	DEMO SET EXPL NE	IGNITER TIME BLST	50	EA	0.02	0	0	50	300	2.0	60
G22109	1365K76400000	DISPERSER RC M5	RIOT AGENT CS-1	1	DR	1.7	0	0	80	80	2.0	140
G22246	1365K76400000	DISPERSER	RIOT AGENT CS-1	1	DR	1.7	0	0	80	80	2.0	140
G22348	1365K76400000	DISPERSER	RIOT AGENT CS-1	1	DR	1.7	0	0	80	80	2.0	140
G96547	1305A65300000	GUN AUT 3 BBL 197	20 MM	3000	RD	0.92	0	1500	1500	100	1.3	99
G96572	1330G81500000	GUN, DIVAD, M247	GRENADE, SMKE	36	EA	5.8	0	24	12	5	0.6	32
G96572	1330G88100000	GUN, DIVAD, M247	GRENADE, FRAG	8	EA	1.7	0	8	0	30	1.6	51
H14752	1337001072235	LAUNCHER GM PERSH	PROP SYST GM 1ST	4	EA	9073.00	0	1	3	1	384.0	9073
H14752	1337001072236	LAUNCHER GM PERSH	PROP SYST GM 2ND	4	EA	7336.00	0	1	3	1	384.0	7336
H14752	1337002621525	LAUNCHER GM PERSH	CASE VENTING SYST	4	EA	32.80	0	1	3	1	2.4	33
H14752	1420000783465	LAUNCHER GM PERSH	GM SURF ATTACK	4	EA	2471.00	0	1	3	1	244.0	2471
H28647	PA79	ATTACK HEL/AH-64	HEL FIRE	16	RD	194.33	0	8	8	9	102.30	1749
H28647	B130/B131	ATTACK HEL/AH-64	30-MM CHAIN GUN	1200	RD	1.37	0	800	400	1728	41.6	2368
H28647	1340H49000000	ATTACK HEL/AH-64	2.75 RKT	76	RD	32.13	0	0	76	4	3.5	131
H68063	1365K91700000	FLAME THROWER POR	THKNR INCEND OIL	5	EA	3.00	0	0	5	1	.2	3
H68063	1375M68000000	FLAME THROWER POR	IGNITION CYLINDER	8	EA	0.54	0	0	8	100	1.2	54
H68063	6810002649019	FLAME THROWER POR	PEPTIZER 1 GAL	1	EA	8.00	0	0	1	1	.9	8
J81750	1305A13100000	INF FIGHTING VEHICLE	7.62 COAXIAL	6600	RD	.09	0	2340	4260	800	.9	80
J81750	1305A07200000	INF FIGHTING VEHICLE	5.56 FIRING PORT	6720	RD	.03	0	4200	2520	1680	.9	80
J81750	1305A07200000	INF FIGHTING VEHICLE	5.56 (M161A1)	240	RD	.03	0	140	100	1680	.9	80
J81750	1410HB0100000	INF FIGHTING VEHICLE	TOW MSL	16	RD	80.0	0	5	11	1	4.9	89
J81750	1305A97400000	INF FIGHTING VEHICLE	25-MM APDS-T	360	RD	2.0	0	225	135	30	0.6	56.1

J81750	1305A97500000	INF FIGHTING VEHICLE	25-MM HEI-T	1050	RD	2.0	0	675	375	30	0.6	56.1
J81750	1427DR0100000	INF FIGHTING VEHICLE	DRAGON	6	RD	67.0	0	2	4	1	7.0	67
J81750	1340H55700000	INF FIGHTING VEHICLE	LAW-M72	3	RD	7.8	0	3	0	15	8.3	45
J81750	1330G81500000	INF FIGHTING VEHICLE	GRENADE, SMK	24	RD	5.8	0	16	8	5	.6	32
J81750	1330F88100000	INF FIGHTING VEHICLE	GRENADE, FRAG	10	RD	.11	0	0	10	30	1.6	51
J95467	1345K14300000	GUIDED MISSILE	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
J95467	1410009308358	GUIDED MISSILE	CHAPARRAL	12	EA	315.00	0	8	4	1	24.1	315
J95533	1305A13100000	GUIDED MSL CARR	7.62 MM	500	RD	0.09	0	500	0	800	.9	80
J95533	1305A57600000	GUIDED MSL CARR	.50 CAL API/API-T	300	RD	0.38	0	300	0	200	.9	90
J95533	1330G88100000	GUIDED MSL CARR	GREEN HAND FRAG	20	EA	1.70	0	20	0	30	1.5	51
J95533	1330G90000000	GUIDED MSL CARR	GREEN INCENDIARY	6	EA	2.94	0	6	0	16	.8	47
J95533	1345K14300000	GUIDED MSL CARR	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
J95533	1370L49500000	GUIDED MSL CARR	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
J95533	1410009308358	GUIDED MISSILE	CHAPARRAL M548	12	EA	315.00	0	8	4	1	24.1	315
J96694	1305A65500000	GUN AAA SP M163	20 MM VULCAN	1000	RD	0.92	0	800	200	100	1.3	98
J96694	1305A79200000	GUN AAA SP M163	20 MM VULCAN	5000	RD	0.92	0	4000	1000	100	1.3	98
J96694	1330G90000000	GUN AAA SP M163	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
J96694	1345K14300000	GUN AAA SP M163	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
J96694	1370L49500000	GUN AAA SP M163	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
J96820	1305A13100000	GUN AAA SP M42	7.62 MM MG	1750	RD	0.09	0	1750	0	800	.9	80
J96820	1310B55900000	GUN AAA SPO M42	40 MM HEIT	720	RD	1.72	0	480	240	64	1.7	110
J96820	1330G88100000	GUN AAA SP M42	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
J96820	1330G90000000	GUN AAA SP M42	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
J96820	1345K14300000	GUN AAA SP M42	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
J96820	1370L49500000	GUN AAA SP M42	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
J96845	1305A65500000	GUN AAA TWD M167	20 MM VULCAN	1000	RD	0.92	0	700	300	100	1.3	98
J96845	1305A79200000	GUN AAA TWD M167	20 MM VULCAN	3000	RD	0.92	0	1000	2000	100	1.3	98
J96845	1330G90000000	GUN AAA TWD M167	GREEN INCENDIARY	4	EA	1.94	0	4	0	16	.8	47
J96845	1345K14300000	GUN AAA TWD M167	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
J96845	1370L49500000	GUN AAA TWD M167	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
J97230	1320D36100000	GUN SP M107	CHG PROPELL M86	104	EA	114.00	0	2	102	1	3.4	114
J97230	1230D49300000	GUN SP M107	REDUCER FLASH	104	EA	1.30	0	20	84	100	3.6	130
J97230	1320D53600000	GUN SP M107	CHG PROPELLING	26	EA	114.00	0	0	26	1	3.4	114
J97230	1320D57200000	GUN SP M107	175 MM PROJ HE	104	RD	158.00	0	2	102	6	10.6	948
J97230	1330G88100000	GUN SP M107	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.5	51
J97230	1330G90000000	GUN SP M107	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
J97230	1345K14300000	GUN SP M107	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
J97230	1370L49500000	GUN SP M107	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
J97230	1390N28600000	GUN SP M107	FUZE MTSQ	21	EA	5.16	0	1	20	12	1.5	62
J97230	1390N31100000	GUN SP M107	175 MM FUZE PD	104	EA	3.44	0	1	103	16	1.4	55
J97230	1390N46300000	GUN SP M107	175 MM FUZE PROX	78	EA	5.16	0	1	77	12	1.5	62
J97230	1390N52300000	GUN SP M107	PRIMER	110	EA	0.12	0	2	108	500	1.9	62
K29660	1330G90000000	HEL ATTACK AHIG	GREEN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K29660	1330G93000000	HEL ATTACK AHIG	GREEN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K29660	1330G94000000	HEL ATTACK AHIG	GREEN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K29660	1330G94500000	HEL ATTACK AHIG	GREEN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K29660	1330G95000000	HEL ATTACK AHIG	GREEN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34

Table 2-20. Ammunition Basic Load Guide — (Cont'd)

LIN	DODAC/MSN	WPN DESCRIPTION	AMMO DESCRIP	QTY PER WPN	UI	WT PER ITEM	QTY CARR ON PERS	QTY CARR ON VEH	QTY CARR BULK	QTY PER CONT	CU PER CONT	WT PER CONT
K29660	1330G95500000	HEL ATTACK AHIG	GREEN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K29660	1370L49500000	HEL ATTACK AHIG	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K29694	1330G90000000	HEL ATTACK AHIS	GREEN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K29694	1330G93000000	HEL ATTACK AHIS	GREEN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K29694	1330G94000000	HEL ATTACK AHIS	GREEN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K29694	1330G94500000	HEL ATTACK AHIS	GREEN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K29694	1330G95000000	HEL ATTACK AHIS	GREEN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K29694	1330G95500000	HEL ATTACK AHIS	GREEN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K29694	1370L49500000	HEL ATTACK AHIS	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K29694	1410010072507	HEL ATTACK AHIS	GM TOW EXT RANGE	20	EA	80.0	0	8	12	1	4.9	89
K30378	1330G90000000	HEL CARGO TRANS	GREEN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K30378	1330G93000000	HEL CARGO TRANS	GREEN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K30378	1330G94000000	HEL CARGO TRANS	GREEN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K30378	1330G94500000	HEL CARGO TRANS	GREEN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K30378	1330G95000000	HEL CARGO TRANS	GREEN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K30378	1330G95500000	HEL CARGO TRANS	GREEN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K30378	1370L49500000	HEL CARGO TRANS	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K30449	1330G90000000	HEL CARGO TRANS	GREEN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K30449	1330G93000000	HEL CARGO TRANS	GREEN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K30449	1330G94000000	HEL CARGO TRANS	GREEN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K30449	1330G94500000	HEL CARGO TRANS	GREEN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K30449	1330G95000000	HEL CARGO TRANS	GREEN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K30449	1330G95500000	HEL CARGO TRANS	GREEN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K30449	1470L49500000	HEL CARGO TRANS	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K30515	1330G90000000	HEL CARGO TRANS	GREEN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K30515	1330G93000000	HEL CARGO TRANS	GREEN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K30515	1330G94000000	HEL CARGO TRANS	GREEN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K30515	1330G94500000	HEL CARGO TRANS	GREEN HAND SMK TE	1	EA	2.13	0	1	0	16	1.1	34
K30515	1330G95000000	HEL CARGO TRANS	GREEN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K30515	1330G95500000	HEL CARGO TRANS	GREEN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K30515	1370L49500000	HEL CARGO TRANS	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K30516	1330G90000000	HEL CARGO TRANS	GREEN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K30516	1330G93000000	HEL CARGO TRANS	GREEN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K30516	1330G94000000	HEL CARGO TRANS	GREEN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K30516	1330G94500000	HEL CARGO TRANS	GREEN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K30516	1330G95000000	HEL CARGO TRANS	GREEN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K30516	1330G95500000	HEL CARGO TRANS	GREEN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K30516	1370L49500000	HEL CARGO TRANS	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K30548	1330G90000000	HEL UTIL EH-1H	GREEN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K30548	1330G93000000	HEL UTIL EH-1H	GREEN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K30548	1330G94000000	HEL UTIL EH-1H	GREEN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K30548	1330G94500000	HEL UTIL EH-1H	GREEN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K30548	1330G95000000	HEL UTIL EH-1H	GREEN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K30548	1330G95500000	HEL UTIL EH-1H	GREEN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K30548	1370L49500000	HEL UTIL EH-1H	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7

K30548	1330G95500000	HEL UTIL EH-1H	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K30548	1370L49500000	HEL UTIL EH-1H	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K30645	1330G90000000	HEL OBSN OH-6A	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K30645	1330G93000000	HEL OBSN OH-6A	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K30645	1330G94000000	HEL OBSN OH-6A	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K30645	1330G94500000	HEL OBSN OH-6A	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K30645	1330G95000000	HEL OBSN OH-6A	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K30645	1330G95500000	HEL OBSN OH-6A	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K30645	1370L49500000	HEL OBSN OH-6A	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K31042	1330G90000000	HEL OBSN OH-58A	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K31042	1330G93000000	HEL OBSN OH-58A	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K31042	1330G94000000	HEL OBSN OH-58A	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K31042	1330G94500000	HEL OBSN OH-58A	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K31042	1370L49500000	HEL OBSN OH-58A	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K31767	1330G90000000	HEL UTIL UH-1C	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K31767	1330G90000000	HEL UTIL UH-1C	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K31767	1330G93000000	HEL UTIL UH-1C	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K31767	1330G94000000	HEL UTIL UH-1C	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K31767	1330G94500000	HEL UTIL UH-1C	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K31767	1330G95000000	HEL UTIL UH-1C	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K31767	1330G95500000	HEL UTIL UH-1C	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K31767	1370L49500000	HEL UTIL UH-1C	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K31786	1330G90000000	HEL UTIL UH-1D	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K31786	1330G93000000	HEL UTIL UH-1D	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K31786	1330G94000000	HEL UTIL UH-1D	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K31786	1330G94500000	HEL UTIL UH-1D	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K31786	1330G95000000	HEL UTIL UH-1D	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K31786	1330G95500000	HEL UTIL UH-1D	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K31786	1370L49500000	HEL UTIL UH-1D	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K31795	1330G90000000	HEL UTIL UH-1H	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K31795	1330G93000000	HEL UTIL UH-1H	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K31795	1330G94000000	HEL UTIL UH-1H	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K31795	1330G94500000	HEL UTIL UH-1H	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K31795	1330G95000000	HEL UTIL UH-1H	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K31795	1330G95500000	HEL UTIL UH-1H	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K31795	1370L49500000	HEL UTIL UH-1H	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K31804	1330G90000000	HEL UTIL UH-1M	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K31804	1330G93000000	HEL UTIL UH-1M	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K31804	1330G94000000	HEL UTIL UH-1M	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34
K31804	1330G94500000	HEL UTIL UH-1M	GREN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K31804	1330G95000000	HEL UTIL UH-1M	GREN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K31804	1330G95500000	HEL UTIL UH-1M	GREN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K31804	1370L49500000	HEL UTIL UH-1M	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K32293	1330G90000000	HEL UTIL UH-60A	GREN HAND INCEN	2	EA	2.94	0	2	0	16	.8	47
K32293	1330G93000000	HEL UTIL UH-60A	GREN HAND SMK HC	2	EA	2.56	0	2	0	16	.9	41
K32293	1330G94000000	HEL UTIL UH-60A	GREN HAND SMK GR	1	EA	2.13	0	1	0	16	1.1	34

Table 2-20. Ammunition Basic Load Guide — (Cont'd)

LN	DODAC/NSN	WPN DESCRIPTION	AMMO DESCRIP	QTY PER WPN	UI	WT PER ITEM	QTY CARR ON PERS	QTY CARR ON VEH	QTY CARR BULK	QTY PER CONT	CU PER CONT	WT PER CONT
K32293	1330G94500000	HEL UTIL UH-60A	GREEN HAND SMK YE	1	EA	2.13	0	1	0	16	1.1	34
K32293	1330G95000000	HEL UTIL UH-60A	GREEN HAND SMK RD	1	EA	2.13	0	1	0	16	1.1	34
K32293	1330G95500000	HEL UTIL UH-60A	GREEN HAND SMK VI	1	EA	2.13	0	1	0	16	1.1	34
K56981	1305A57600000	HOW SP M110	.50 CAL API/API-T	600	RD	0.38	0	400	200	200	.9	90
K56981	1390D62400000	HOW SP M110	8 INCH HE RAP	16	RD	208.00	0	0	16	6	14.6	1250
K56981	1390D65000000	HOW SP M110	8 INCH HE APICM	3	RD	208.00	0	0	3	6	61.8	1250
K56981	1390D65100000	HOW SP M110	8 INCH HE DPICM	93	RD	208.00	0	0	93	6	11.9	1250
K56981	1320D66200000	HOW SP M110	CHG PROP WH BAG ER	50	RD	86.90	0	1	49	1	2.4	87
K56981	1320D67500000	HOW SP M110	CHG PROPEL GR BAG	35	EA	31.00	0	1	34	1	1.1	35.8
K56981	1320D67600000	HOW SP M110	CHP PROPEL WH BAG	55	EA	52.00	0	1	54	1	1.6	58.5
K56981	1320D68000000	HOW SP M110	8 INCH HE	28	RD	208.00	0	2	26	6	12.4	1250
K56981	1320D68100000	HOW SP M110	REDUCER FLASH	105	EA	1.30	0	3	102	50	1.6	65
K56981	1330G88100000	HOW SP M110	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
K56981	1330G90000000	HOW SP M110	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
K56981	1345K14300000	HOW SP M110	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
K56981	1370L49500000	HOW SP M110	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K56981	1390N27800000	HOW SP M110	FUZE MTSQ M564	8	EA	3.44	0	1	7	16	1.0	55
K56981	1390B28500000	HOW SP M110	FUZE MTSQ M577	96	EA	3.44	0	20	76	16	1.0	55
K56981	1390N33500000	HOW SP M110	FUZE PD M557	24	EA	3.44	0	3	21	16	1.1	55
K56981	1390N46300000	HOW SP M110	FUZE PROX M728	16	EA	3.94	0	1	15	16	1.3	63
K56981	1390N52300000	HOW SP M110	PRIMER M82	156	EA	0.12	0	3	153	500	2.0	62
K57118	1320D67500000	HOW TWD M115	CHG PROPEL GR BAG	84	EA	31.00	0	12	72	1	1.1	35.8
K57118	1320D67600000	HOW TWD M115	CHG PROPEL WH BAG	21	EA	52.00	0	10	11	1	1.6	58.5
K57118	1320D68000000	HOW TWD M115	8 INCH HE	70	RD	208.00	0	10	60	6	12.4	1250
K57118	1320D68100000	HOW TWD M115	REDUCER FLASH M3	21	EA	1.30	0	5	16	100	3.6	130
K57118	1330G90000000	HOW TWD M115	GREEN INCENDIARY	2	EA	2.94	0	2	0	16	.8	47
K57118	1390D65100000	HOW TWD M115	8 INCH HE DPICM	30	EA	208.00	0	10	20	6	11.9	1250
K57118	1390N28500000	HOW TWD M115	FUZE MTSQ M577	32	EA	3.44	0	2	30	16	1.0	55
K57118	1390N33500000	HOW TWD M115	FUZE PD M 557	43	EA	3.44	0	9	34	16	1.1	55
K57118	1390N46300000	HOW TWD M115	FUZE PROX M 728	33	EA	3.94	0	8	25	16	1.3	63
K57118	1390N52300000	HOW TWD M115	PRIMER M 82	105	EA	0.12	0	21	84	500	2.0	62
K57256	1305A57600000	HOW SP M108	.50 CAL M 548 MTD	630	RD	0.38	0	630	0	200	.9	90
K57256	1315C44500000	HOW SP M108	105 MM HE WO FUZE	58	RD	60.00	0	36	22	2	2.0	120
K57256	1315C44800000	HOW SP M108	105 MM HEPT W/FZ BD	4	RD	60.00	0	2	2	2	1.8	120
K57256	1315C44900000	HOW SP M108	105 MM ILL FZ MT	4	RD	60.00	0	2	2	2	1.8	120
K57256	1315C45100000	HOW SP M108	105 MM SM FZ MT GR	1	RD	58.00	0	1	0	2	1.8	116
K57256	1315C45200000	HOW SP M108	105 MM HCBE FZ ;IT	9	RD	58.00	0	1	8	2	1.8	116
K57256	1315C45300000	HOW SP M108	105 MM SMK FZ MT	1	RD	58.00	0	1	0	2	1.8	116
K57256	1315C45500000	HOW SP M108	105 MM SMK FZ MT	1	RD	58.00	0	1	0	2	1.8	116
K57256	1315C46200000	HOW SP M108	105 MM HE ICM FZMT	46	RD	64.00	0	9	37	2	2.0	128
K57256	1315C47700000	HOW SP M108	105 MM SMK W/O FZ	6	RD	61.50	0	2	4	2	1.8	123
K57256	1315C51300000	HOW SP M108	105 MM APERS FZ MT	3	RD	61.00	0	1	2	2	1.8	122
K57256	1330G88100000	HOW SP M108	GREEN HAND FRAG	10	EA	1.70	0	10	0	30	1.6	51

K57256	1330G90000000	HOW SP M108	GREN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
K57256	1345K1430000	HOW SP M108	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
K57256	1370L49500000	HOW SP M108	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K57256	1390N24800000	HOW SP M108	FUZE MT M565	4	EA	3.38	0	2	2	16	1.0	54
K57256	1390N27800000	HOW SP M108	FUZE MTSQ M564	13	EA	3.44	0	10	3	16	1.0	55
K57256	1390N33500000	HOW SP M108	FUZE PD M557	69	EA	3.43	0	17	52	16	1.1	55
K57256	1390N46300000	HOW SP M108	FUZE PROX M728	51	EA	3.49	0	15	36	16	1.3	63
K57392	1315C44500000	HOW TWD M101/102	105 MM HE W/O FUZE	84	RD	60.00	0	20	64	2	2.0	120
K57392	1315C44800000	HOW TWD M101/102	105 MM HEPT WF BD	5	RD	60.00	0	1	4	2	1.8	120
K57392	1315C44900000	HOW TWD M101/102	105 MM ILL FZ MT	5	RD	60.00	0	1	4	2	1.8	120
K57392	1315C45100000	HOW TWD M101/102	105 MM SMK FZ MT	2	RD	58.00	0	1	1	2	1.8	116
K57392	1315C45200000	HOW TWD M101/102	105 MM HCBE FZ MT	12	RD	58.00	0	2	10	2	1.8	116
K57392	1315C45300000	HOW TWD M101/102	105 MM SMK FZ MT	2	RD	58.00	0	1	1	2	1.8	116
K57392	1315C45500000	HOW TWD M101/102	105 MM SMK FZ MT	2	RD	58.00	0	1	1	2	1.8	116
K57392	1315C46200000	HOW TWD M101/102	105 MM HE ICM FZMT	64	RD	64.00	0	10	54	2	2.0	128
K57392	1315C47700000	HOW TWD M101/102	105 MM SMK W/O FZ	10	RD	61.50	0	2	8	2	1.8	123
K57392	1315C51300000	HOW TWD M101/102	105 MM APERS FZ MT	6	RD	61.00	0	2	4	2	1.8	122
K57392	1330G90000000	HOW TWD M101/102	GREN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
K57392	1390N24800000	HOW TWD M101/102	FUZE MT M565	2	EA	3.38	0	1	1	16	1.0	54
K57392	1390N27800000	HOW TWD M101/102	FUZE MTSQ M564	19	EA	3.44	0	5	14	16	1.0	55
K57392	1390N33500000	HOW TWD M101/102	FUZE PD M557	103	EA	3.43	0	18	85	16	1.1	55
K57392	1390N46300000	HOW TWD M101/102	FUZE PROX M728	74	EA	3.49	0	10	64	16	1.3	63
K57667	1305A57600000	HOW SP M109	.50 CAL API/API-T	630	RD	0.38	0	525	105	200	.9	90
K57667	1305A57600000	HOW SP M109	.50 CAL M-548 MTD	600	RD	0.38	0	400	200	200	.9	90
K57667	1320D50200000	HOW SP M109	155 MM ADAM	7	EA	106.0	0	0	7	8	9.7	882
K57667	1320D50500000	HOW SP M109	155 MM ILL	5	RD	96	0	0	3	8	6.8	797
K57667	1320D50600000	HOW SP M109	155 MM HCBE	7	RD	119.0	0	4	3	8	6.8	948
K57667	1320D50900000	HOW SP M109	155 MM RAAMS	19	EA	106	0	0	19	8	9.7	882
K57667	1320D51000000	HOW SP M109	155 MM COPPERHEAD	9	EA	114	0	0	9	1	5	226
K57667	1320D53300000	HOW SP M109	CHC PROP WH BAG ER	85	EA	53.0	0	15	70	1	1.3	61.9
K57667	1320D54000000	HOW SP M109	CHG PROPEL GR BAG	59	EA	14.50	0	6	53	2	.9	32.7
K57667	1320D54100000	HOW SP M109	CHG PROPEL WH BAG	90	EA	31.00	0	15	75	1	.9	35.3
K57667	1320D54400000	HOW SP M109	155 MM HE WO FZ	18	RD	96.0	0	4	14	8	6.8	797
K57667	1320D55000000	HOW SP M109	155 MM WP	5	RD	96.0	0	0	5	8	6.8	797
K57667	1320D55200000	HOW SP M109	REDUCER FLASH	175	EA	.16	0	30	145	800	2.3	128
K57667	1320D56100000	HOW SP M109	155MM HE APICM	5	EA	106.0	0	0	5	8	9.7	874
K57667	1320D56200000	HOW SP M109	155MM HE DPCM	135	RD	106.0	0	28	107	8	9.7	874
K57667	1320D57900000	HOW SP M109	155MM HE RAP	24	EA	96.0	0	0	24	8	6.8	768
K57667	1330G88100000	HOW SP M109	GREN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
K57667	1330G90000000	HOW SP M109	GREN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
K57667	1345K14300000	HOW SP M109	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
K57667	1370L49500000	HOW SP M109	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
K57667	1390N27800000	HOW SP M109	FUZE MTSQ M564	8	EA	3.44	0	0	8	16	1.0	55
K57667	1320N28500000	HOW SP M109	FUZE MTSQ M577	180	EA	3.44	0	32	148	16	1.0	55
K57667	1390N33500000	HOW SP M109	FUZE PD M 557	40	EA	3.43	0	4	36	16	1.1	55
K57667	1390N46300000	HOW SP M109	FUZE PROX M 728	16	EA	3.94	0	0	16	16	1.3	63
K57667	1390N52300000	HOW SP M109	PRIMER M 82	250	EA	0.12	0	100	150	500	2.0	62

Table 2-20. Ammunition Basic Load Guide — (Cont'd)

LN	DODAC/NSN	WPN DESCRIPTION	AMMO DESCRIP	QTY PER WPN	UI	WT PER ITEM	QTY CARR ON PERS	QTY CARR ON VEH	QTY CARR BULK	QTY PER CONT	CU PER CONT	WT PER CONT
K57803	1320D50200000	HOW TWD 155 MM	155 MM ADAM	6	EA	106.0	0	0	6	8	9.7	882
K57803	1320D50500000	HOW TWD 155 MM	155MM ILL	4	RD	96	0	0	4	8	6.8	797
K57803	1320D50600000	HOW TWD 155 MM	155 MM HCBE	5	EA	119.0	0	0	5	8	6.8	948
K57803	1320D50900000	HOW TWD 155 MM	155 MM RAAM	15	EA	106	0	0	15	8	9.7	882
K57803	1320D51000000	HOW TWD 155 MM	155 COPPERHEAD	8	EA	714	0	0	8	1	5	226
K57803	1320D53300000	HOW TWD 155 MM	CHG PROP WH BAG ER	75	EA	53.0	0	0	75	1	1.3	61.9
K57803	1320D54000000	HOW TWD 155 MM	CHG PROPEL GR BAG	36	EA	14.50	0	0	36	2	.9	32.7
K57803	1320D54100000	HOW TWD 155 MM	CHG PROPEL WH BAG	80	EA	31.00	0	0	80	1	.9	35.3
K57803	1320D54400000	HOW TWD 155 MM	155 MM HE WO FUZE	15	RD	96.0	0	0	15	8	6.8	797
K57803	1320D55000000	HOW TWD 155 MM	155 MM WP	4	RD	96.0	0	0	4	8	6.8	797
K57803	1320D55200000	HOW TWD 155 MM	REDUCER FLASH	140	EA	.16	0	0	142	800	2.3	128
K57803	1320D56100000	HOW TWD 155 MM	155 MM HE APICM	4	RD	106.0	0	0	4	8	9.7	874
K57803	1320D56200000	HOW TWD 155 MM	155MM HE DPICM	110	RD	106.0	0	0	110	8	9.7	874
K57803	1320D57900000	HOW TWD 155 MM	155 MM HE RAP	18	EA	96.0	0	0	18	8	6.8	768
K57803	1330G90000000	HOW TWD 155 MM	GREN INCENDIARY	4	EA	2.33	0	0	4	18	.8	42
K57803	1390N27800000	HOW TWD 155 MM	FUZE MTSQ M564	8	EA	3.44	0	0	8	16	1.0	55
K57803	1390N28500000	HOW TWD 155 MM	FUZE MTSQ M577	160	EA	3.44	0	0	160	16	1.0	55
K57803	1390N33500000	HOW TWD 155 MM	155 MM FUZE PD M557	32	EA	3.44	0	0	32	16	1.1	55
K57803	1390N46300000	HOW TWD 155 MM	155 MM FUZE PROX M728	8	EA	3.94	0	0	8	16	1.3	63
K57803	1390N52500000	HOW TWD 155 MM	PRIMER	200	EA	0.12	0	0	200	500	2.0	62
K57821	1320D50200000	HOW TWD 155 MM	155 MM ADAM	6	EA	106.0	0	0	6	8	9.7	882
K57821	1320D50500000	HOW TWD 155 MM	155 MM ILL	4	RD	96	0	0	4	8	6.8	797
K57821	1320D50600000	HOW TWD 155 MM	155 MM SMF HG	5	EA	119	0	0	5	8	6.8	948
K57821	1320D50900000	HOW TWD 155 MM	155 MM RAAM	15	EA	106	0	0	15	8	9.7	882
K57821	1320D51000000	HOW TWD 155 MM	155 MM COPPERHEAD	8	EA	114	0	0	8	1	5	226
K57821	1320D53300000	HOW TWD 155 MM	CHG PROP WH BAG ER	18	EA	53.0	0	4	14	1	1.3	61.9
K57821	1320D54000000	HOW TWD 155 MM	CHG PROPEL GR BAG	47	EA	14.50	0	4	43	2	.9	32.7
K57821	1320D54100000	HOW TWD 155 MM	CHG PROPEL WH BAG	124	EA	31.00	0	22	102	1	.9	35.3
K57821	1320D54400000	HOW TWD 155 MM	155 MM HE WO FUZE	15	RD	96.0	0	0	15	8	6.8	797
K57821	1320D55000000	HOW TWD 155 MM	155 MM WP	4	RD	96.0	0	0	4	8	6.8	797
K57821	1320D55200000	HOW TWD 155 MM	REDUCER FLASH	142	EA	.16	0	20	122	800	2.3	128
K57821	1320D56100000	HOW TWD 155 MM	155 HE ADICM	4	EA	106	0	0	4	8	9.7	874
K57821	1320D56200000	HOW TWD 155 MM	155 MM HE DPICM	110	RD	106	0	0	110	8	9.7	874
K57821	1320D57900000	HOW TWD 155 MM	155 MM HE RAP	18	EA	96	0	0	18	8	6.8	768
K57821	1330G90000000	HOW TWD 155 MM	GREN INCENDIARY	4	EA	2.33	0	0	4	18	.8	42
K57821	1390N27800000	HOW TWD 155 MM	FUZE MTSQ M564	8	EA	3.44	0	0	8	16	1.0	55
K57821	1390N28500000	HOW TWD 155 MM	FUZE MTSQ M577	160	EA	3.44	0	0	160	16	1.0	55
K57821	1390N33500000	HOW TWD 155 MM	155 MM FUZE PD M557	32	EA	3.44	0	0	32	16	1.1	55
K57821	1390N46300000	HOW TWD 155 MM	155 MM FUZE PROM M728	16	EA	3.94	0	0	16	16	1.3	63
K57821	1390N52500000	HOW TWD 155 MM	PRIMER MM 244	200	EA	0.12	0	0	200	500	2.0	62
L43664	1330G88100000	LAUNCHER BRIDGE	GREN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
L43664	1330G90000000	LAUNCHER BRIDGE	GREN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
L43664	1345K14300000	LAUNCHER BRIDGE	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53

L4364	1370L49500000	LAUNCHER BRIDGE	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
L44575	1310B54600000	LAUNCH GREEN M79	GREEN 40 MM	10	EA	0.81	0	10	0	72	1.5	56.2
L44595	1310B54600000	LAUNCH GREEN M203	GREEN 40 MM	10	EA	0.81	0	10	0	72	1.5	56.2
L44612	1330G81500000	LAUNCHER GREEN M239	GREEN SMK SCREEN	48	EA	6.2	0	24	0	5	.6	32
L44644	1420009370860	LAUNCHER GM LANCE	GM LANCE MAIN ASS	9	RD	3000.00	0	1	8	1	25.0	3450
L44712	1330G90000000	GML NIKE-HERC	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
L44712	1336005753457	GML NIKE-HERC	GM	2	EA	0.00	0	0	2	0	1172.4	19832
L44894	1390Z98000000	MLRS	ROCKET DPICM	108	EA	872.67	0	12	96	6	128.3	5236
L45016	1340H48700000	ARM SUB HEL M158	2.75 IN HEAT	1	RD	35.25	0	0	1	4	3.1	141
L45016	1340H48800000	ARM SUB HEL M158	2.75 IN HE FZ VT	1	RD	40.50	0	0	1	4	3.5	162
L45016	1340H49000000	ARM SUB HEL M158	2.75 IN FZ PD	26	RD	31.04	0	9	17	25	17.9	776
L45016	1340H51900000	ARM SUB HEL M158	2.75 IN WP	3	RD	31.04	0	1	2	25	17.9	776
L45016	1340H53400000	ARM SUB HEL M158	2.75 IN HE FZ PD	11	RD	39.84	0	4	7	25	18.7	996
L45058	1340H48700000	ARM SUB HEL M159	2.75 IN HEAT	2	RD	35.25	0	1	1	4	3.1	141
L45058	1340H48800000	ARM SUB HEL M159	2.75 IN HE FZ VT	3	RD	40.50	0	1	2	4	3.5	162
L45058	1340H49000000	ARM SUB HEL M159	2.75 IN HE FZ PD	70	RD	31.04	0	23	47	25	17.9	776
L45063	1340H51900000	LAUN RKT M200	2.75 IN WP	6	RD	31.04	0	2	4	25	17.9	776
L45058	1340H53400000	ARM SUB HEL M159	2.75 IN HE FZ PD	6	RD	31.04	0	2	4	25	17.9	776
L45063	1340H48700000	LAUN RKT M200	2.75 IN HEAT	33	RD	39.84	0	11	22	25	18.7	996
L45063	1340H48800000	LAUN RKT M200	2.75 IN HE FZ VT	2	RD	35.25	0	1	1	4	3.1	141
L45063	1340H49000000	LAUN RKT M200	2.75 IN HE FZ VT	3	RD	40.50	0	1	2	4	3.5	162
L45063	1340H49000000	LAUN RKT M200	2.75 IN HE FZ VT	70	RD	31.04	0	23	47	4	3.5	131
L45063	1340H51900000	LAUN RKT M200	2.75 IN WP	6	RD	31.04	0	2	4	4	3.6	148
L45063	1340H53400000	LAUN RKT M200	2.75 IN HE FZ PD	33	RD	39.84	0	11	22	16	3.6	160
L45240	1340H11000000	LAUNCHER 4 TUBE	66MM RKT CLIP 4RD	4	EA	15.10	2	0	2	4	9.8	140
L45740	1410L10072507	TOW GM	TOW MSL	8	EA	80.00	0	4	4	1	4.9	89
L45757	1330G90000000	GML HAWK	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
L45757	1410001336971	GML HAWK	GM HAWK IMPROVED	6	EA	0.00	0	0	6	1	124.6	3351
L45808	1330G90000000	GML HAWK	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
L45808	1410007099649	GML HAWK	GM HAWK	6	EA	3245.00	0	6	0	1	148.9	3245
L91975	1305A57600000	MG .50 CAL	.50 CAL API/API-T	630	RD	0.38	0	420	210	200	.9	90
L92249	1305A16500000	MG 7.62 ACFT LT	7.62 MM	6500	RD	0.08	0	1300	5200	1500	1.3	120
L92386	1305A13100000	MACHINE GUN M60	7.62 MM	3100	RD	0.09	800	1400	900	800	.9	80
M09009	1305A06400000	MACHINE GUN MZ49	5.56 MM LINKED	600	RD	.035	600	0	0	800	.9	47
M67871	1310B62700000	MORTAR 60 MM	60 MM ILL W FZ	20	EA	6.31	0	10	10	16	2.1	101
M67871	1310B63000000	MORTAR 60 MM	60 MM WP W FZ	40	RD	6.30	0	20	20	10	1.0	63
M67871	1310B63200000	MORTAR 60 MM	60 MM HE W FZ	180	RD	5.38	0	90	90	16	1.0	86
M67871	1330G90000000	MORTAR 60 MM	GREEN INCENDIARY	2	EA	2.94	0	2	0	16	.8	47
M67939	1310B62700000	MORTAR 60 MM M224	60 MM ILL W FZ	52	EA	6.31	0	36	16	16	2.1	101
M67939	1310B63000000	MORTAR 60 MM M224	60 MM WP W FZ	70	EA	6.30	0	48	22	10	1.0	63
M67939	1310B64200000	MORTAR 60 MM M224	60 MM HE W FZ	227	EA	6.00	0	156	71	16	2.1	112
M67939	1330G90000000	MORTAR 60 MM M224	GREEN INCENDIARY	2	EA	2.94	0	2	0	16	.8	47
M68008	1315C22600000	MORTAR 81 MM	81 MM ILL W FUZE	4	RD	19.66	0	2	2	3	1.7	63.5
M68008	1315C23600000	MORTAR 81 MM	81 MM HE WO FUZE	24	RD	15.00	0	10	14	3	1.4	53.9
M68008	1315C25600000	MORTAR 81 MM	81 MM HE W FUZE	81	RD	15.33	0	63	18	3	1.4	53.9
M68008	1315C27600000	MORTAR 81 MM	81 MM WP W FUZE	11	RD	16.00	0	5	6	3	1.4	55.7
M68008	1330G90000000	MORTAR 81 MM	GREEN INCENDIARY	2	EA	2.94	0	2	0	16	.8	47

Table 2-20. Ammunition Basic Load Guide — (Cont'd)

LIN	DODAC/MSN	WPN DESCRIPTION	AMMO DESCRIP	QTY PER	UI	WT PER ITEM	QTY CARR	QTY CARR	QTY CARR BULK	QTY PER CONT	CU PER CONT	WT PER CONT
				WPN			ON PERS	ON VEH				
M68008	1390N30800000	MORTAR 81 MM	FUZE PD 557 MM	5	EA	2.56	0	5	0	16	.9	41
M68008	1390N40200000	MORTAR 81 MM	FUZE PROX 728 MM	25	EA	3.94	0	12	13	16	.9	63
M68282	1315C705000000	MORTAR 107 MM	107 MM HE W/O FUZE	125	EA	34.0	0	38	87	2	1.5	71.6
M68282	1315C706000000	MORTAR 107 MM	107 MM ILL W FUZE	5	EA	40.00	0	2	3	2	1.5	85
M68282	1315C708000000	MORTAR 107 MM	107 MM WP W FUZE	30	EA	36.00	0	10	20	2	1.5	74.2
M68282	1330G900000000	MORTAR 107 MM	GREEN INCENDIARY	2	EA	2.94	0	2	0	16	.8	47
M68282	1390N3350000000	MORTAR 107 MM	FUZE PD M557	5	EA	3.44	0	5	0	16	.9	55
M68282	1390N4630000000	MORTAR 107 MM	FUZE PD M728	128	EA	3.84	0	52	76	16	1.1	63
M92362	1310G5420000000	MACHINE GUN MK19	40 MM HEOP	768	RD	.75	0	240	528	48	1.3	60
N96741	1305A47500000000	PISTOL AUTO .45 CAL	.45 CAL	21	RD	0.06	21	0	0	2000	.9	113
N97015	1370L2310000000	PISTOL PYROTECH	SIG ILL RED	20	RD	0.63	0	5	25	80	1.5	50
N97015	1370L2330000000	PISTOL PYROTECH	SIG ILLUM GREEN	10	RD	0.63	0	4	14	80	1.5	50
R50544	1305A57600000000	REC VEH M578	.50 CAL API/API-T	1000	RD	0.38	0	1000	0	200	.9	90
R50544	1330G88100000000	REC VEH M578	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
R50544	1330G90000000000	REC VEH M578	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
R50544	1345K14300000000	REC VEH M578	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
R50544	1370L495000000000	REC VEH M578	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
R50681	1305A576000000000	REV VEH M88	.50 CAL API/API-T	1470	RD	0.38	0	1470	0	200	.9	90
R50681	1330G881000000000	REC VEH M88	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
R50681	1330G900000000000	REC VEH M88	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
R50681	1345K143000000000	REC VEH M88	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
R50681	1370L495000000000	REC VEH M88	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
R91107	1305A4000000000000	REVOLVER 2 IN BRL	.38 CAL	18	RD	0.04	18	0	0	2400	.9	92
R91244	1305A4000000000000	REVOLVER .38 CAL	.38 CAL	18	RD	0.04	18	0	0	2400	.9	96
R94977	1305A0680000000000	RIFLE M-16	5.56 MM TRACER	80	RD	0.04	25	25	0	1640	.9	65.7
R94977	1305A0710000000000	RIFLE M-16	5.56 MM BALL	360	RD	0.04	115	245	0	1680	.9	67.2
R95114	1305A13000000000000	RIFLE 7.62	7.62 MM BALL 5 CL	760	RD	0.86	160	420	180	840	.9	80
R95251	1305A13000000000000	RIFLE 7.62 W/BIPOD	7.62 MM BALL 5 CL	760	RD	0.86	160	420	180	840	.9	80
R95422	1305A13600000000000	RIFLE 7.62 SNIPER	7.62 MM NATOMATCH	244	RD	0.86	100	44	100	240	.2	18
R96210	1330G90000000000000	RIFLE RECOILLESS	GREEN INCENDIARY	2	EA	2.94	2	0	0	16	.8	47
R96484	1315C282000000000000	RIFLE RECOILLESS	90 MM HEAT	18	RD	18.50	2	10	6	2	1.2	37
R96484	1330G90000000000000	RIFLE RECOILLESS	GREEN INCENDIARY	2	EA	2.94	2	0	0	16	.8	47
R96758	1305A574000000000000	RIFLE SPOTTER	.50 CAL	220	RD	0.35	0	110	110	220	.9	77
R96758	1315C650000000000000	RIFLE RECOILLESS	106 MM HEAT	15	RD	60.50	0	8	7	2	2.7	121
R96758	1315C651000000000000	RIFLE RECOILLESS	106 MM HEAT	15	RD	60.50	0	9	6	2	2.6	121
R96758	1330G9000000000000000	RIFLE RECOILLESS	GREEN INCENDIARY	2	EA	2.94	0	2	0	16	.8	47
R96925	1305A056000000000000	RIFLE/SHOTGUN SUR	.18	20	RD	.18	0	0	20	500	.3	33
R96925	1305A086000000000000	RIFLE/SHOTGUN SUR	.22 CAL	400	RD	0.01	0	0	400	1000	.6	81
T13374	1305A07100000000000000	TANK CBT M1-105 MM	M16A1	840	RD	.03	0	600	240	1680	.9	67.2
T13374	1305A131000000000000000	TANK CBT M1-105 MM	7.62 MM (COAX)	11500	RD	.09	0	10000	1500	800	.9	80
T13374	1305A131000000000000000	TANK CBT M1-105 MM	7.62 MM (M60)	14800	RD	.09	0	14000	800	800	.9	80
T13374	1305A58900000000000000	TANK CBT M1-105 MM	.50 CAL	1200	RD	.38	0	900	300	200	.9	90
T13374	1315C521000000000000000	TANK CBT M1-105 MM	105 MM APFSDS-T	31	RD	61.00	0	25	6	1	1.5	67.3

T13374	1315C50800000	TANK CBT M1-105 MM	HEAT FZ PIBD	31	RD	68.00	0	20	11	2	3.2	145
T13374	1315C51200000	TANK CBT M1-105 MM	105 MM WP FZ PD	4	RD	68.50	0	2	2	2	3.2	142
T13374	1315C51800000	TANK CBT M1-105 MM	105 MM HEPT FZ BD	8	RD	68.50	0	7	1	2	3.0	143
T13374	1315C51900000	TANK CBT M1-105 MM	105 MM APERS FZ MT	4	RD	68.50	0	1	3	2	3.5	145
T13374	1330G81500000	TANK CBT M1-105 MM	GRENADE, SMK	36	RD	5.8	0	24	12	5	.6	32
T13374	1330G88100000	TANK CBT M1-105 MM	GRENADE, FRAG	8	RD	.11	0	8	0	30	1.6	51
T39223	1305A01100000	SHOT GUN 12 GAUGE	#00 SHOT	10	RD	0.18	10	0	0	500	.8	88
T84368	9150002617895	SMK GENERATOR	FOG OIL - 40F SGF2	2	DR	488.00	0	1	1	1	7.5	488
T84368	9150002617898	SMK GENERATOR	ABOVE 40F SGF1	2	DR	488.00	0	1	1	1	7.5	488
T92242	1340H5700000	M1025 & M1026	LAW, M72	2	RD	5.2	0	2	0	15	8.3	118
U56346	1305A47500000	SUBMACHINE GUN	.45 CAL	189	RD	0.06	80	0	100	2000	.9	102
V13101	1305A13100000	TANK CBT 105MM	7.62 MM	5940	RD	0.09	0	5940	0	800	.9	80
V13101	1305A58900000	TANK CBT 105 MM	.50 CAL API/API-T	1260	RD	0.38	0	840	420	200	.9	90
V13101	1315C50800000	TANK CBT 105 MM	105 MM HEAT FZPIBD	31	RD	68.00	0	23	8	2	3.2	145
V13101	1315C12000000	TANK CBT 105 MM	105 MM WP FZ PD	4	RD	68.50	0	2	2	2	3.2	142
V13103	1315C51800000	TANK CBT 105 MM	105 MM HEPT FZ PD	8	RD	68.50	0	8	0	2	3.0	143
V13101	1315C51900000	TANK CBT 105 MM	105 MM APERS FZ MT	4	RD	68.50	0	1	3	2	3.5	145
V13101	1315C52100000	TANK CBT 105 MM	105 MM APFSDS-T	31	RD	61.00	0	29	2	1	1.5	67.3
V13101	1330G88100000	TANK CBT 105 MM	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
V13103	1330G90000000	TANK CBT 105 MM	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
V13101	1345K14300000	TANK CBT 105 MM	MINE AP M18	2	EA	8.93	0	2	0	6	1.8	53
V13101	1370L49500000	TANK CBT 105 MM	FLAME SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
V13270	1305A13100000	TANK CBT 152 MM	7.62 MM	5940	RD	0.09	0	5940	0	800	.9	80
V13270	1305A58900000	TANK CBT 152 MM	.50 CAL API/API-T	1260	RD	0.38	0	840	420	200	.9	80
V13270	1320D38100000	TANK CBT 152 MM	152 MM HEAT MP	36	RD	98.00	0	29	8	1	3.3	98
V13270	1320D39000000	TANK CBT 152 MM	CANISTER APER	6	RD	97.00	0	4	2	1	4.0	97
V13270	1330G88100000	TANK CBT 152 MM	GREEN HAND FRAG	8	EA	1.70	0	8	0	30	1.6	51
V13270	1330G90000000	TANK CBT 152 MM	GREEN INCENDIARY	4	EA	2.94	0	4	0	16	.8	47
V13270	135K143000000	TANK CBT 152 MM	MINE AP M18	2	EA	8.83	0	2	0	6	1.8	53
V13270	1370L49500000	TANK CBT 152 MM	FLARE SUR TRIP	10	EA	1.94	0	10	0	16	1.9	30.7
V13270	1410001508932	TANK CBT 152 MM	SHILLELAGH GM	23	RD	112.00	0	13	10	1	3.3	112
WB0715	1330G90000000	TRACKER GM DRAGON	GRAN HAND INCEN	2	EA	2.94	2	0	0	16	.8	47
WB0715	1427001638959	TRACKER GM DRAGON	GM&LAUNCHR M 222	6	EA	67.00	2	0	4	1	7.0	67
Z49140	1305A36300000	PISTOL 9 MM M9	9 MM PISTOL	30	RD	.027	30	0	0	2000	.9	80

2-14. CHARACTERISTICS OF CHEMICAL AGENTS AND CHEMICAL MUNITIONS. Table 2-21 provides data on properties of chemical agents.

Table 2-22 provides data on the characteristics of chemical munitions.

Table 2-22. Characteristics of Chemical Munitions

1	2	3	4	5	6	7	8
			Weight of filled munition (lb)	Burning Time (min)	Radius of burst (m)	Number and color of bands	Standard color coding system Base (primary use)
1	Munition	Agent symbol					
Hand grenades							
2	J77626 Gren, hand, green-smoke, M18	GS	1.20	1	NA	None	Light-green background; black lettering.
3	J77763 Gren, hand, incd, TH3, AN-M14	TH3	2.00	1/2	NA	None	Light red; black lettering.
4	J78757 Gren, hand, riot con, type CS1, M25A2	CS1	0.50	NA	5	1 red	Gray; red lettering.
5	J79133 Gren, hand, red-smoke, M18	RS	1.20	1	NA	1 light green	Olive drab; light-green; lettering.
6	J79270 Gren, hand, riot, CN1, ABC, M25A2	CN1	0.50	NA	5	1 red	Gray; red lettering.
7	J79544 Gren, hand, riot, CS, M7A3	CS	1.00	1/4 to 1/2	NA	1 red	Gray; red lettering.
8	J79681 Gren, hand, smoke, ABC, AN-M8	HC	1.50	2	NA	None	Light green; black lettering.
9	J79818 Gren, hand, violet-smoke, M18	VS	1.20	1	NA	1 light green	Olive drab; light-green lettering.
10	J79955 Gren, hand, yellow-smoke, M18	YS	1.20	1	NA	1 light green	Olive drab; light green lettering.
11	J80092 Gren, hand and rifle, smoke, WP, M34	WP	1.50	1	35	1 yellow	Light green; light-red lettering.
Flamethrower							
12	K67817 Ignition cyl, flamethrower, M1	NA	0.10	1/10 to 1/5	NA	None	Light red; black lettering.
Incendiaries							
13	C39059 Burst, incd, fld, M4	Inc	2.25	NA	35	1 yellow	Light red; black lettering.
14	F52132 Crypto equip destroyer, incd, TH4, M1A2, M2A1	TH4	34.00	1	NA	None	Light red; black lettering.
15	G33515 Docu destroyer, emerg, incd, M3	Inc	117.00	20	NA	None	Light red; black lettering.
16	H40472 File destroyer, emerg, incd, M3	Inc	117.00	20	NA	None	Light red; black lettering.
Landmine							
17	M48959 Mine, gas, persistent, VX, 2-gal, ABC and M23	VX	22.75 (unfuzed)	NA	NA	3 green, 1 yellow	Gray; green lettering.
Smokepots and signals							
18	T52025 Sig, gnd, green-smoke, prcht, M128E1	GS	1.16	1/4	NA	None	Light green; black lettering.
19	T52162 Sig, gnd, red-smoke prcht, M129E1	RS	1.16	1/4	NA	None	Light green; black lettering.
20	T84505 Smokepot, HC, 30-lb, M5	HC	33.00	12 to 22	NA	None	Light green; black lettering.
21	T84657 Smokepot, fltg, HC, M4A2	HC	38.00	10 to 15	NA	None	Light green; black lettering.

Table 2-22. Characteristics of Chemical Munitions — (Cont'd)

1	2	3	4	5	6	7	8
			Weight of filled munition (lb)	Burning Time (min)	Radius of burst (m)	Number and color of bands	Standard color coding system Base (primary use)
1	Munition	Agent symbol					
Fire starter							
22	U30201 Starter, fire, NP3, M2	NP3	0.03	4	NA	None	Light red; black lettering.
Rockets							
23	S03725 Rkt, gas, nonpersistent GB, 115-mm, M55	GB	55.00	NA	NA	3 green, 1 yellow.	Gray; green lettering.
24	S03862 Rkt, gas, persistent, VX, 115-mm, M55	VX	56.00	NA	NA	3 green, 1 yellow.	Gray; green lettering.
81-mm mortar							
25	D50165 Ctg, 81-mm, smoke, WP M370	WP	9.34	NA	20 to 30	None	Light green; light-red lettering.
90-mm gun							
26	D51535 Ctg, smoke, WP, 90-mm gun, M313	WP	23.64	NA	15 to 30	None	Light green; light-red lettering.
27	D51672 Ctg, 90-mm, smoke, WP, M313C	WP	23.57	NA		None	Light green; light-red lettering.
105-mm howitzer							
28	D54275 Ctg, 105-mm, gas, HD, M60	HD	43.27	N1	NA	2 green	Gray; green lettering.
29	D54412 Ctg, smoke, WP, 105-mm how, M60	WP	34.83	NA	20 to 40	None	Light green; light-red lettering.
30	D54960 Ctg, green-smoke, BE, 105-mm how, M84	GS	30.48	1 to 4	NA	None	Light green; white lettering.
31	D55097 Ctg, smoke, IIC, BE, 105-mm how, M84	HC	32.86	1 to 4	NA	None	Light green; white lettering.
32	D55234 Ctg, red-smoke, BE, 105-mm how, M84	RS	30.68	1 to 4	NA	None	Light green; white lettering.
33	D55508 Ctg, yellow-smoke, BE, 105-mm how, M84	YS	30.29	1 to 4	NA	None	Light green; white lettering.
34	D56878 Ctg, gas, nonpersistent, 105-mm how, M360	GB	35.59	NA	NA	3 green	Gray; green lettering.
35	Canister, green-smoke, 105-mm shell, M2	GS	40.30	2	NA	None	Light green; black lettering.
36	Canister, red-smoke, 105-mm shell, M2	RS	40.50	2	NA	None	Light green; black lettering.
37	Canister, smoke, HC, 105-mm shell, M1	HC	42.70	3	NA	None	Light green; black lettering.
38	Canister, violet-smoke, 105-mm shell, M2	VS	40.30	2	NA	None	Light green; black lettering.
39	Canister, yellow-smoke, 105-mm shell, M2	YS	40.10	2	NA	None	Light green; black lettering.
40	D41048 Ctg, 40-mm, red-smoke fill, for lchr, M79	RS				None	Bright red; black lettering.
41	D41052 Ctg, 40-mm, riot con, CS fill, for lchr	CS		NA		1 red	Gray; red lettering.
42	D59344 Ctg, gas, persistent, HD, 4.2-in mort, M2A1	HD	23.50	NA		2 green	Gray; green lettering.

43	D59481	Ctg, smoke, WP, 4.2-in mort, M328	WP	28.66	NA	20 to 50 ¹	None	Light green; light-red lettering.
44	E42210	Cluster canister, tac CS, 130-lb, E159	CS	130			1 red	Gray; red lettering.
45	E42460	Cluster frag bomb, incapacitating M43	BZ				2 red	Gray; red lettering.
46	L43914	Lchr and 35-mm ctg, tac CS, 16-tube, E8	CS	33.5			1 red, 1 brown	Gray; red lettering.
120-mm gun								
47	P69501	Proj, 120-mm, smoke, WP-T, M357	WP	50.30	NA	50 ¹	None	Light green, light-red lettering.
155-mm howitzer								
48	P72789	Proj, gas, persistent, HD, 115-mm how, M110	HD	94.00	NA		2 green	Gray; green lettering.
49	P73063	Proj, green-smoke, BE, 155-mm how, M116B1	GS	86.44	1/2 to 4	NA	None	Light green; white lettering.
50	P73200	Proj, smoke, HC, BE, 155-mm how, M116B1	HC	94.35	1 to 4	NA	None	Light green; white lettering.
51	P73337	Proj, red smoke, BE, 155-mm how, M116B1	RS	86.44	1/2 to 4	NA	None	Light green, white lettering.
52	P73611	Proj, yellow-smoke, BE, 155-mm how, M116B1	YS	86.44	1/2 to 1/4	NA	None	Light green; white lettering.
53	P73885	Proj, gas, nonpersistent, GB, 155-mm how, M121A1.	GB		NA	See footnote ²	3 green	Gray; green lettering.
54	P74022	Proj, gas, persistent, VX, 155-mm how, M121A1	VX		NA	See footnote ²	3 green	Gray; green lettering.
55		Canister, violet-smoke, 155-mm shell, M3	VS	86.40	1 to 3	NA	None	Light green; black lettering.
56		Canister, violet-smoke, 155-mm shell, M4	VS	86.40	1/2 to 3	NA	None	Light green; black lettering.
57		Canister, yellow-smoke, 155-mm shell, M3	YS	86.40	1 to 3	NA	None	Light green; black lettering.
58		Canister, yellow-smoke, 155-mm shell, M3	YS	86.40	1/2 to 3	NA	None	Light green; black lettering.
59		Canister, green-smoke, 155-mm shell, M4	GS	86.44	1 to 3	NA	None	Light green; black lettering.
60		Canister, green-smoke, 155-mm shell, M4	GS	86.40	1/2 to 3	NA	None	Light green; black lettering.
61		Canister, red-smoke, 155-mm shell, M3	RS	86.40	1 to 3	NA	None	Light green; black lettering.
62		Canister, red-smoke, 155-mm shell, M4	RS	86.40	1/2 to 3	NA	None	Light green; black lettering.
63		Canister, smoke, HC, 155-mm shell, M1	HC	95.10	2 to 4	NA	None	Light green; black lettering.
64		Canister, smoke, HC, 155-mm shell, M2	HC	94.35	1 to 4	NA	None	Light green; black lettering.
8-in howitzer								
65	P75392	Proj, gas, nonpersistent, GB, 8-in how, M426	GB		NA	See footnote ²	3 green	Gray; green lettering.
66	P15529	Proj, gas, persistent, VX, 8-in how, M426	VX		NA	See footnote ²	3 green	Gray; green lettering.
Rocket warheads								
67	Y25286	Whd sec, 762-mm rkt, gas, nonpersistent, GB, M190	GB	1,716.00	NA	See footnote ²	3 green, 1 yellow	Gray; green lettering.
68	Y26314	Whd, 2.75-in rkt, smoke	WP		NA		1 brown	Light green; light-red lettering.
69		Whd, 2.75-in rkt, colored smoke			NA		1 brown	Light green; black lettering.
70		Whd sec, GM, gas, nonpersistent, GB, M212	GB	2,069.99	NA	See footnote ²	3 green, 1 yellow	Gray; green lettering.

FOOTNOTES:

- ¹For antipersonnel effect
²Information is classified

2-15. AMMUNITION EXPENDITURES.

a. Tables 2-16 and 2-17 provide ammunition requirements in rounds and short tons. Table 2-16 contains data for the armored, infantry, mechanized, airborne, and air assault divisions; separate armored, mechanized, infantry, light infantry, and airborne brigades; air cavalry combat brigade; armored cavalry regiment with armored reconnaissance airborne assault vehicle (ARAAV); and armored cavalry regiment with M60A1 tank for protracted periods of combat. Table 2-16 represents those rates experienced by a force of division size or smaller that is heavily committed and firing at high rates of fire. Table 2-17 provides daily artillery ammunition requirements in rounds per weapon per day by level of operation.

b. The defense of position and attack of position (deliberately organized) are both divided into two time periods, first day and succeeding days. The first-day time period represents the first 24-hour period of engagement. The succeeding-days time period

represents the second, third, and fourth day of the battle.

c. The protracted period refers to days 6 through 15. Fifth-day requirements may be established by taking the average of the succeeding-days rate and the protracted rate.

d. Table 2-16 may also be used for estimating ammunition expenditures per weapon for divisions or separate brigades in combat situations not stated in the table. To estimate such ammunition requirements, the percentage provided in paragraphs (1) through (8) below may be used as multipliers for the rates in Table 2-16.

(1) Attack of position (permanent fortification): 100 percent of attack of position (deliberately organized).

(2) Attack of position (hastily organized): 100 percent of attack of position (deliberately organized).

(3) Covering force: 100 percent of defense of position.

(4) Inactive situation: 80 percent of protracted period.

(5) Meeting engagement: 200 percent of protracted period.

(6) Pursuit: 40 percent of protracted period.

(7) Retrograde: 59 percent of defense of position (succeeding days).

(8) Assault of hostile shore: 100 percent of defense of position (succeeding days).

e. Table 2-18 provides daily antitank guided missile requirements in rounds and STONS. Table 2-19 provides ammunition requirements in rounds per weapon per day by level of operation for all types of divisions.

SECTION V. CLASSES VI, VII, VIII, IX, AND X

2-16. CLASS VI. Class VI supplies consist of Army and Air Force Exchange Service (AAFES) items for sale to troops and authorized individuals. Class VI

supplies may be available through local procurement, through transfer from theater stocks, or through requisition on the AAFES in the continental United States (CONUS). Available shipping space dictates allocation and shipment of Class VI supplies to the theater. The AAFES determines requirements; procures, stores, and distributes supplies; and operates resale facilities. A planning factor of 3.2 pounds per person per day (Table 2-3) can be used for estimating Class VI requirements.

2-17. CLASS VII. Major end items (tanks, vehicles, or aircraft) which are ready for intended use are normally controlled through command channels. Requests for issues of additional or replacement items are normally based on TOEs or a similar authorization document. Requests are processed through command channels. A planning factor of 15 pounds per person per day (Table 2-3) can be used.

2-18. CLASS VIII.

a. Medical materiel includes medical, dental, and veterinary supplies; repair parts; and equipment. The planning factor of 1.22 pounds per person per day (Table 2-3) should be used with caution and only in the absence of current demand data.

b. Class VIII requirements are influenced significantly by factors such as intensity of combat and environmental factors such as weather and sanitary conditions. Factors such as special requirements for storage and distribution (security, refrigeration, and potency periods) that are associated with medical materiel must also be considered.

c. The surgeon at each level of command has the staff responsibility to monitor medical supplies and equipment and provide technical advice to the operational commander regarding requirements determination, procurement, storage, and distribution of Class VIII supplies.

2-19. CLASS IX.

a. Class IX materiel consists of repair parts and components to include kits, assemblies, and subassemblies (both repairable and nonrepairable) required for maintenance support of all equipment except medical materiel. Class IX is demand-supported. However, there are a limited number of items that are stocked regardless of demands. The procedures for establishing initial stockage and retention of stocks are in the DA Pamphlet 710 series.

b. The consumption factors shown in Table 2-3 of 2.5 pounds per person per day are based on the 1984 Logistics Center Class IX Item Analysis Study.

c. Specific repair parts requirements are dependent upon the equipment of the force and the maintenance policy of the force, which may specify varying degrees of reliance upon cannibalization, a level of maintenance based on performing mission-essential maintenance only, and varying policy on stockage.

d. Assuming a policy of airlifting all critical repair parts, a general planning factor of 15 percent of the theater tonnage based on both Vietnam and peacetime experience may be used.

e. Tables 2-23 and 2-24 provide combat force and selected CS and CSS unit usage rates. Estimates are based on the repair parts usage reports obtained from sample data collections (SDC), AMC supply sustainability estimates, and ASL demand history

files. Each table states whether consumption is averaged by day or year. All rates are in short tons for end items or TOE units with the exception of the unit consumption by level of commitment. In Table 2-23, rates are stated at the light level of activity.

Table 2-23. Class IX Combat Forces Usage Rates (Short Tons/Day)

1. This table provides roll-ups for division- and brigade-sized organizations as follows:
 - a. Subunit annual consumption as a total tons/year sum, further incremented to the level of maintenance.
 - b. Divisional base and total consumption annually and daily.
2. The annual average consumption equates to light level of commitment.
- c. A combat intensity matrix.
- d. A divisional consumption rate in tons/day less the estimated tonnage which would go to the intermediate (GS) level to support the requirement.

TOE UNIT STRENGTH	0700OH010 Infantry Division 19,276	Consumption By Level of Commitment										Consumption By Level of Commitment									
UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (OS)	(.44) AVERAGE INT (GS)	MOD- HEAVY	ERATE	LIGHT	RE- SERVE	UN- COMMITTED	Base Total	2710.27	162.62	1355.14	1192.52	87.20	13.02	59.70	36.17	465.16	1853.78	5.0
0700AH000	9.41	.56	4.70	4.14	2	1.333	1	.28	.19	19417300	4.66	.28	2.33	2.05							
19017H710	17.85	1.07	8.93	7.85	32.16	21.43	16.08	4.50	3.06	98037300	.53	.03	.27	.23							
11053H000	51.76	3.11	25.88	22.77	Total Lb/Man/Day	3.34	2.23	1.67	.47	061007400	1400.00	84.00	700.00	616.00							
06155H710	287.94	17.28	143.97	126.69	Consumption (Less	18.00	12.00	9.00	2.52	630117300	773.093	46.44	386.97	340.53							
07042H000 (K3)	20.25	1.21	10.13	8.90	INT (GS) in Tons/Day				1.71	Base Total											
44325H000	663.88	39.83	331.94	292.11	TOE UNIT					07015H020 (K5)	198.19	11.98	99.10	87.20							
17205H230	166.66	9.94	82.82	72.89	0700OT400* Hi-Tech Motorized Division					070657400	29.60	1.78	14.80	13.02							
57055H320	257.77	15.47	128.86	113.42	STRENGTH	14,277				070957410	135.69	8.14	67.84	59.70							
34165H810	68.42	4.10	34.21	30.10						070957420	82.21	4.93	41.10	36.17							
03107H000	20.58	1.24	10.29	9.06	UNITS					Total/yr	4213.14	252.79	2106.57	1853.78							
06100H000	2171.07	130.26	1085.53	955.27	CONSUMPTION					Total/Day	11.54	.69	5.77								
29001H000	610.32	36.62	305.16	268.54	ANNUAL AVERAGE UNIT					Lb/Man/Day	1.62										
Base Total	4344.91	260.69	2172.46	1911.76	(.06) AVERAGE UNIT																
17035H010	766.50	45.99	383.25	337.26	(.50) AVERAGE INT (OS)																
07045H030	470.73	28.24	235.37	207.12	(.44) AVERAGE INT (GS)																
07015H020 (K8)	288.32	17.30	144.16	126.86	UNITS																
Total/yr	5870.46	352.23	2935.23	2583.00	CONSUMPTION																
Total/Day	16.08	.97	8.04	7.08	AVERAGE UNIT																
Lb/Man/Day	1.67				(.06) AVERAGE UNIT																

*This "T" series TOE, as used in the basic Class IX Planning Factors Study, is retained in this revision since the "D" series TOE for a Motorized Division (0700OD600) is developmental and cannot be used.

Table 2-23. Class IX Combat Forces Usage Rates (Short Tons/Day) — (Cont'd)

TOE 17000H020 UNIT Armor Division (6 x 5) STRENGTH 19,322						TOE 37000H020 UNIT Mechanized Division (6 x 4) STRENGTH 19,055						TOE 57000H420 UNIT Airborne Division STRENGTH 17,198					
UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (DS)	(.44) AVERAGE INT (GS)		UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (DS)	(.44) AVERAGE INT (GS)		UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (DS)	(.44) AVERAGE INT (GS)	
17004H000	10.23	.61	5.11	4.50		37004H000	10.21	.61	5.1	4.49		57004H300	4.97	.30	2.49	2.19	
19017H710	17.85	1.07	8.93	7.85		19017H710	17.85	1.07	8.93	7.85		05025H300	79.54	4.77	39.77	35.00	
17025H700	279.04	16.74	139.52	122.78		17085H700	279.04	16.74	139.52	122.78		11215H300	48.24	2.89	24.12	21.22	
11035H000	51.76	3.11	25.88	22.77		11035H000	51.76	3.11	25.88	22.77		11725H400	144.21	8.65	72.10	63.45	
05145H720	451.38	27.08	225.69	198.61		05145H720	451.38	27.08	225.69	198.61		57042H300 (X3)	8.68	.52	4.34	3.82	
17042H000 (X3)	125.04	7.50	62.52	55.02		37042H000 (X3)	124.80	7.49	62.40	54.91		19017H720	13.77	.83	6.89	6.06	
17105H020	771.92	46.32	385.96	339.64		17105H020	771.92	46.31	385.96	339.64		44425H100	98.05	5.88	49.02	43.14	
06300H000	2832.14	169.93	1416.07	1246.14		44325H000	663.88	39.83	331.94	292.11		34265H000	34.31	2.06	17.16	15.10	
29021H000	733.56	44.01	366.78	322.77		03087H700	20.58	1.23	10.29	9.06		03087H700	20.58	1.24	10.29	9.06	
44325H000	663.88	39.83	331.94	292.11		34165H820	114.58	6.87	57.29	6.42		57055H310	258.04	15.48	129.02	113.54	
03087H700	20.58	1.23	10.29	9.06		06300H020	2832.14	168.93	1416.07	1246.14		06200H300	471.69	28.30	235.84	207.54	
34165H820	114.58	6.87	57.29	50.42		29011H000	689.15	41.35	344.58	303.23		29051H310	191.22	11.47	95.61	84.14	
Base Total	6071.96	364.31	3035.98	2671.66		Base Total	6027.29	361.64	3013.65	2652.01		Base Total	1373.30	82.40	686.65	604.25	
17035H010 (X6)	4599.00	275.94	2300.00	2023.56		17035H010 (X4)	3066.00	183.96	1533.00	1349.04		17215H300	307.12	18.43	153.56	135.13	
07045H030 (X5)	2353.65	141.22	1176.83	1035.61		07045H030 (X6)	2824.38	169.46	1412.19	1242.73		07035H010 (9)	202.26	12.13	101.13	89.00	
Total/Yr	13024.61	781.48	6512.31	5730.83		Total/Yr	11917.67	715.06	5958.84	5243.77		07107H600 (3)	11.73	.70	5.86	5.16	
Total/Day	35.69	2.14	17.85	15.70		Total/Day	32.65	1.96	16.33	14.37		Total/Yr	1894.41	113.66	947.21	833.54	
Lb/Man/Day	3.69					Lb/Man/Day	3.43					Total/Day	5.19	.31	2.60	2.28	

Consumption By Level of Commitment						Consumption By Level of Commitment						Consumption By Level of Commitment					
MOD- HEAVY	ERATE	LIGHT	RE- SERVE	UN- COMMITTED		MOD- HEAVY	ERATE	LIGHT	RE- SERVE	UN- COMMITTED		MOD- HEAVY	ERATE	LIGHT	RE- SERVE	UN- COMMITTED	
Bounds	2	1.333	1	.28	.19	Bounds	2	1.333	1	.28	.19	Bounds	2	1.333	1	.28	.19
Total Tons/Day	71.38	47.57	35.69	10.00	6.78	Total Tons/Day	65.30	43.52	32.65	9.14	6.20	Total Tons/Day	10.38	6.92	5.19	1.45	.99
Total Lb/Man/Day	7.39	4.92	3.69	1.03	.70	Total Lb/Man/Day	6.86	4.57	3.43	.96	.65	Total Lb/Man/Day	1.21	.80	.60	.17	.11
Consumption (Less INT GS) in Tons/Day	39.97	26.64	19.99	5.60	1.29	Consumption (Less INT GS) in Tons/Day	36.57	24.37	18.28	5.12	3.47	Consumption (Less INT GS) in Tons/Day	5.81	3.88	2.91	.81	.55

TOE 67000J000
UNIT Air Assault Division
STRENGTH 19,234

TOE 77000T400
UNIT Infantry Division (Light)
STRENGTH 10,227

TOE 8000H410
UNIT Armor Division (6 x 4, M60/M113)
STRENGTH 16,951

UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (OS)	(.44) AVERAGE INT (GS)
67004J000	5.29	.32	2.65	2.33
19037J000	15.23	.91	7.61	6.70
11205J000	46.39	2.78	23.20	20.41
05215J000	97.06	5.82	48.53	42.71
67042J000 (X3)	39.83	2.39	19.92	17.53
17095J000	141.66	8.50	70.83	62.33
34275J000	55.98	3.36	27.99	24.63
03087J000	11.91	.71	5.96	5.24
44445J000	31.52	1.89	15.76	13.87
07200J000	627.26	37.64	313.63	276.00
06700J000	1543.70	92.62	771.85	679.23
29041J000	369.73	22.18	184.87	162.68
Base Total	2985.56	179.13	1492.78	1313.65
07055J000 (9)	124.53	7.47	62.27	54.79
Total/Yr	3110.09	186.60	1555.05	1368.44
Total/Day	8.52	.51	4.26	3.75
Lb/Man/Day	.89			

Consumption By Level of Commitment

MOD-	HEAVY	ERATE	MOD-	LIGHT	RE-	UN-
					SERVE	COMMITTED
Bounds	2	1.333	1	1	.28	.19
Total Tons/Day	17.04	11.36	8.52	2.39	1.62	1.17
Total Lb/Man/Day	1.78	1.19	.89	.25	.91	
Consumption (Less INT GS) in Tons/Day	9.54	6.36	4.77	1.34		

UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (OS)	(.44) AVERAGE INT (GS)
77004J400	4.32	.26	2.16	1.90
19117J400	10.13	.61	5.06	4.46
11045J400	35.00	2.10	17.50	15.40
05155J400	31.65	1.90	15.83	13.93
44115J400	55.53	3.33	27.77	24.43
12144J400	—	—	—	—
77042J400 (X3)	39.86	2.39	19.93	102.37
01105J400	232.67	13.96	116.34	102.37
06100J400	430.53	25.83	215.27	189.43
63021J400	210.52	12.63	105.26	92.63
Base Total	1050.21	63.01	525.10	462.09
07015J400 (X9)	79.87	4.79	39.93	35.14
Total/Yr	1130.88	67.80	565.04	497.23
Total/Day	3.10	.19	1.55	1.36
Lb/Man/Day	.60			

Consumption By Level of Commitment

MOD-	HEAVY	ERATE	MOD-	LIGHT	RE-	UN-
					SERVE	COMMITTED
Bounds	2	1.333	1	1	.28	.19
Total Tons/Day	6.2	4.13	3.10	.87	.59	.11
Total Lb/Man/Day	1.20	.80	.60	.17	.33	
Consumption (Less INT GS) in Tons/Day	3.47	2.31	1.74	.49		

UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (OS)	(.44) AVERAGE INT (GS)
87004J410	26.66	1.60	13.33	11.73
19219J400	14.25	.86	7.12	6.27
11035J400	46.60	2.80	23.30	20.50
44165J400	616.64	37.00	308.32	271.32
05145J410	625.71	37.54	312.86	275.31
34285J400	107.65	6.46	53.86	47.37
03387J400	53.89	3.23	26.95	23.71
87042J410 (2)	86.15	5.17	43.08	37.91
87042J420	43.07	2.58	21.54	18.95
17201J410	563.01	33.78	281.51	247.72
12114J400	—	—	—	—
06300J410	3289.31	197.36	1644.66	1447.30
63001J410	1103.45	66.21	551.72	485.52
Base Total	6576.39	394.59	3288.19	2893.61
17235J410 (6)	5051.58	303.09	2525.79	2222.69
07245J420 (4)	1781.08	106.86	890.53	783.67
Total/Yr	13409.05	804.54	6704.53	5899.98
Total/Day	36.74	2.20	18.37	16.17
Lb/Man/Day	4.33			

Consumption By Level of Commitment

MOD-	HEAVY	ERATE	MOD-	LIGHT	RE-	UN-
					SERVE	COMMITTED
Bounds	2	1.333	1	1	.28	.19
Total Tons/Day	73.48	48.97	36.74	10.29	6.98	.82
Total Lb/Man/Day	8.66	5.77	4.33	1.21		
Consumption (Less INT GS) in Tons/Day	41.15	27.42	20.57	5.76		

Table 2-23. Class IX Combat Forces Usage Rates (Short Tons/Day) — (Cont'd)

TOE	87000J420	TOE	87000J430	TOE	87000J440									
UNIT	Mechanized Division (5 × 5, M60/M113)	UNIT	Armor Division (6 × 4, M1/M2, 2AHB)	UNIT	Mechanized Division (5 × 5, M1/M2, 2AHB)									
STRENGTH	17,233	STRENGTH	17,002	STRENGTH	17,304									
UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (DS)	(.44) AVERAGE INT (GS)	UNITS	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (DS)	(.44) AVERAGE INT (GS)					
87004J20	26.66	1.60	13.33	11.73	87004J10	26.66	1.60	13.33	11.73					
19217J400	14.25	.86	7.12	6.27	19217J400	14.25	.86	7.12	6.27					
11035J400	46.60	2.80	23.30	20.50	11035J400	46.60	2.80	23.30	20.50					
44165J400	616.64	37.00	308.32	271.32	44165J400	616.64	37.00	308.32	271.32					
05145J410	625.71	37.54	312.86	275.31	05145J410	625.71	37.54	312.86	275.31					
34285J400	107.65	6.46	53.86	47.37	34285J400	107.65	6.46	53.86	47.37					
03387J400	53.89	3.23	26.95	23.71	03387J400	53.89	3.23	26.95	23.71					
87042J410	43.07	2.58	21.54	18.95	87042J410 (2)	86.15	5.17	43.08	37.91					
87042J420 (2)	86.15	5.17	43.08	37.91	87042J420	43.07	2.58	21.54	18.95					
12114J400	—	—	—	—	17201J420	636.60	38.20	318.30	280.10					
06300J420	3289.31	197.36	1644.66	1447.30	12114J400	—	—	—	—					
63001J420	1104.00	66.21	551.72	485.52	06300J410	3289.31	197.36	1644.66	1447.30					
17201J410	563.01	33.78	281.51	247.72	63001J410	1103.49	66.20	551.72	485.52					
Base Total	6576.94	394.59	3288.19	2893.61	Base Total	6649.08	398.94	3324.54	2925.60					
17235J410 (5)	4209.65	252.58	2104.82	1852.25	17235J420 (6)	6343.08	380.58	3171.54	2790.96					
07245J420 (5)	2226.35	133.58	1113.18	979.59	07245J410 (4)	2272.91	136.37	1136.46	1000.08					
Total/r	13012.94	780.78	6506.47	5725.69	Total/r	15265.07	915.96	7632.99	6716.03					
Total/Day	35.65	2.14	17.83	15.69	Total/Day	41.82	2.51	20.91	18.40					
Lb/Man/Day	4.14				Lb/Man/Day	4.92								
Consumption By Level of Commitment					Consumption By Level of Commitment					Consumption By Level of Commitment				
MOD-		MOD-		MOD-		MOD-		MOD-		MOD-		MOD-		
HEAVY		HEAVY		HEAVY		HEAVY		HEAVY		HEAVY		HEAVY		
ERATE		ERATE		ERATE		ERATE		ERATE		ERATE		ERATE		
LIGHT		LIGHT		LIGHT		LIGHT		LIGHT		LIGHT		LIGHT		
SERVE		SERVE		SERVE		SERVE		SERVE		SERVE		SERVE		
COMMITTED		COMMITTED		COMMITTED		COMMITTED		COMMITTED		COMMITTED		COMMITTED		
UN-		UN-		UN-		UN-		UN-		UN-		UN-		
2		2		2		2		2		2		2		
1.333		1.333		1.333		1.333		1.333		1.333		1.333		
1		1		1		1		1		1		1		
28		28		28		28		28		28		28		
19		19		19		19		19		19		19		
6.77		6.77		6.77		6.77		6.77		6.77		6.77		
7.9		7.9		7.9		7.9		7.9		7.9		7.9		
9.38		9.38		9.38		9.38		9.38		9.38		9.38		
35.65		35.65		35.65		35.65		35.65		35.65		35.65		
4.14		4.14		4.14		4.14		4.14		4.14		4.14		
5.52		5.52		5.52		5.52		5.52		5.52		5.52		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96		19.96		19.96		19.96		19.96		19.96		
5.59		5.59		5.59		5.59		5.59		5.59		5.59		
3.79		3.79		3.79		3.79		3.79		3.79		3.79		
26.61		26.61		26.61		26.61		26.61		26.61		26.61		
19.96		19.96												

TOE 07100H020
UNIT Separate Infantry Brigade
STRENGTH 4,724

UNITS	Consumption By Level of Commitment			
	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (GS)	(.44) AVERAGE INT (GS)
07102H000	33.16	1.99	16.58	14.59
17307H700	204.84	12.29	102.42	90.13
05107H020	156.01	9.36	78.00	68.64
29133H000	156.12	9.37	78.06	68.69
06185H000	174.89	10.49	87.45	76.95
34114H110	29.30	1.76	14.65	12.89
07015H020 (3)	108.12	6.49	54.06	47.57
Total/Yr	862.44	51.74	431.22	379.47
Total/Day	2.36	.14	1.18	1.04
Lb/Man/Day	1.00			

Consumption By Level of Commitment					
	HEAVY	MOD- ERATE	LIGHT	RE- SERVE	UN- COMMITTED
Bounds	2	1.333	1	.28	.19
Total Tons/Day	4.72	3.15	2.36	.66	.45
Total Lb/Man/Day	2.00	1.34	1.00	.28	.19
Consumption (Less INT GS) in Tons/Day	2.64	1.76	1.32	.37	.25

TOE 17051J310
UNIT Armored Cavalry Regiment (M60/M113)
STRENGTH 4,202

UNITS	Consumption By Level of Commitment			
	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (GS)	(.44) AVERAGE INT (GS)
17052J310	62.81	3.77	31.41	27.63
17059H700	45.47	2.73	22.74	20.01
17055J310 (3)	3078.97	184.74	1539.49	1354.75
05108H600	135.26	8.12	67.63	59.51
17387H720	66.03	3.96	33.02	29.05
63065J310	395.05	23.70	197.53	173.82
Total/Yr	3783.59	227.02	1891.80	1664.78
Total/Day	10.37	.62	5.19	4.56
Lb/Man/Day	4.93			

Consumption By Level of Commitment

	HEAVY	MOD- ERATE	LIGHT	RE- SERVE	UN- COMMITTED
Bounds	2	1.333	1	.28	.19
Total Tons/Day	20.74	13.82	10.37	2.90	1.97
Total Lb/Man/Day	9.86	6.57	4.93	1.38	.94
Consumption (Less INT GS) in Tons/Day	11.61	7.74	5.81	1.62	1.10

TOE 17051J330
UNIT Armored Cavalry Regiment (M1/M3)
STRENGTH 5,041

UNITS	Consumption By Level of Commitment			
	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (GS)	(.44) AVERAGE INT (GS)
17052J320	53.65	3.22	26.83	23.61
17055J330 (3)	2879.78	172.79	1439.89	1267.10
17265J310	152.75	9.17	76.38	67.21
06565J300	1047.56	62.85	523.78	460.93
44468J310	257.93	15.48	128.97	113.49
05108J300	131.13	7.87	65.57	57.70
34114J300	60.81	3.65	30.41	26.76
03207J300	30.72	1.84	15.36	13.52
63065J330	430.64	25.84	215.32	189.48
Total/Yr	5044.88	302.69	2522.44	2219.75
Total/Day	13.82	.83	6.91	6.08
Lb/Man/Day	5.48			

Consumption By Level of Commitment					
	HEAVY	MOD- ERATE	LIGHT	RE- SERVE	UN- COMMITTED
Bounds	2	1.333	1	.28	.19
Total Tons/Day	27.64	18.42	13.82	3.87	2.63
Total Lb/Man/Day	10.96	7.30	5.48	1.53	1.04
Consumption (Less INT GS) in Tons/Day	15.48	10.32	7.74	2.17	1.47

TOE 17100H040
UNIT Separate Armored Brigade
STRENGTH 4,430

UNITS	Consumption By Level of Commitment			
	ANNUAL AVERAGE CONSUMPTION	(.06) AVERAGE UNIT	(.50) AVERAGE INT (GS)	(.44) AVERAGE INT (GS)
17102H000	42.85	2.57	21.43	18.85
17307H700	204.84	12.29	102.42	90.13
05127H010	172.37	10.34	86.19	75.84
29075H030	167.29	10.04	83.65	73.61
06375H000	783.39	47.00	391.70	344.69
34114H120	70.60	4.24	35.30	31.06
17035H010 (2)	1533.00	91.98	766.50	674.52
07045H030	470.73	28.24	236.37	207.12
Total/Yr	3445.07	206.70	1722.54	1515.83
Total/Day	9.44	.57	4.72	4.15
Lb/Man/Day	4.26			

Consumption By Level of Commitment					
	HEAVY	MOD- ERATE	LIGHT	RE- SERVE	UN- COMMITTED
Bounds	2	1.333	1	.28	.19
Total Tons/Day	18.88	12.58	9.44	2.64	1.79
Total Lb/Man/Day	8.52	5.68	4.26	1.19	.81
Consumption (less INT GS) in Tons/Day	10.57	7.04	5.29	1.48	1.00

TOE	17200H500
UNIT	Air Cavalry Combat Brigade
STRENGTH	4,128

[illegible]

Consumption By Level of Commitment						Consumption By Level of Commitment						Consumption By Level of Commitment						
			MOD-		RE-	UN-					MOD-		RE-	UN-				
			HEAVY		ERATE	LIGHT	SERVE	COMMITTED				HEAVY		ERATE	LIGHT	SERVE	COMMITTED	
Total/Yr			3150.10		189.00	1575.05	1386.04	Lb/Man/Day			.44							
Total/Day			8.63		.52	4.32	3.80											
Lb/Man/Day			3.60															
Bounds			2		1.333	1	.28	.19	Total Tons/Day			2		1.333	1	.28	.19	
Total Tons/Day			5.5		3.67	2.75	.77	.52	Total Lb/Man/Day			17.26		11.50	8.63	2.42	1.64	Consumption (less
Total Lb/Man/Day			2.66		1.77	1.33	.37	.25	Total Lb/Man/Day			7.2		4.80	3.60	1.00	.68	INT GS) in Tons/Day
Consumption (less INT GS) in Tons/Day			3.08		2.06	1.54	.43	.29	Consumption (less INT GS) in Tons/Day			9.67		6.44	4.83	1.36	.92	
Consumption (less INT GS) in Tons/Day			9.67		6.44	4.83	1.36	.92										

TOE 77100H000
UNIT Separate Light Infantry Brigade
STRENGTH 4,199

TOE 87000J230
UNIT Heavy Division, Armor (6 x 4, M1/M2)
STRENGTH 18,084

TOE 87000J240
UNIT Heavy Division, Armor (5 x 5, M1/M2)
STRENGTH 18,375

UNITS	ANNUAL		(06)		(50)		(44)	
	AVERAGE	CONSUMPTION	AVERAGE	UNIT	AVERAGE	INT (DS)	AVERAGE	INT (GS)
77102H000	30.34		1.82		15.17		13.35	
17117H000	12.72		.76		6.36		5.60	
05207H000	44.47		2.67		22.24		19.57	
29245H000	82.46		4.95		41.23		36.28	
06115H000	171.79		10.31		85.90		75.59	
07015H020	108.11		6.49		54.05		47.57	
Total/Yr	449.89		26.99		224.95		197.95	
Total/Day	1.23		.07		.62		.54	
Lb/Man/Day	.59							

Consumption By Level of Commitment

	MOD-		RE-		UN-	
	HEAVY	ERATE	LIGHT	SERVE	COMMITTED	
Bounds	2	1.333	1	.28	.19	
Total Tons/Day	2.46	1.64	1.23	.34	.23	
Total Lb/Man/Day	1.18	.79	.59	.17	.11	
Consumption (Less	1.38	.92	.69	.19	.13	
INT GS) in Tons/Day						

Consumption By Level of Commitment

	MOD-		RE-		UN-	
	HEAVY	ERATE	LIGHT	SERVE	COMMITTED	
Bounds	2	1.333	1	.28	.19	
Total Tons/Day	88.62	59.06	44.31	12.41	8.42	
Total Lb/Man/Day	9.80	6.53	4.90	1.37	.93	
Consumption (Less	49.63	33.07	24.81	6.95	4.72	
INT GS) in Tons/Day						

Consumption By Level of Commitment

	MOD-		RE-		UN-	
	HEAVY	ERATE	LIGHT	SERVE	COMMITTED	
Bounds	2	1.333	1	.28	.19	
Total Tons/Day	86.74	57.81	43.37	12.14	8.24	
Total Lb/Man/Day	9.44	6.29	4.72	1.32	.90	
Consumption (Less	48.57	32.37	24.29	6.80	4.61	
INT GS) in Tons/Day						

Table 2-24. Class IX CS and CSS Usage Rates (Short Tons/Year)

TOE	UNIT	STRENGTH	WEIGHT	TOE	UNIT	STRENGTH	WEIGHT	TOE	UNIT	STRENGTH	WEIGHT
01117H700	Cmd Airplane Co	130	2.62	05530H6HA	Diving Tm	9	1.02	09059H200	Mnt Co GMS (GS)	230	42.33
01127H100	Corps Avn Co	208	47.31	05530H6HD	Uhl (2500) Tm	34	5.22	09062H100	HHC Ord Gp Ammo DS/GS	76	3.12
01137H100	Avn Co TA	222	38.61	05530H6HE	Uhl (4000) Tm	56	6.19	09062H300	HHC Ord Gp Conv Ammo, DS/GS	67	3.07
01226H200	HHD ATC Bn	75	6.69	05530H6HF	Uhl (10000) Tm	94	19.81	09064H100	Ord Co Conv Ammo (DS)	210	37.37
01252H200	HHD Cnt Avn Gp	70	1.5	05530H6HG	Pwr Plt Op/Mn Tm	16	.11	09066H100	HHC Ord Bn Ammo DS/GS	77	3.19
01256H200	HHD CAB	66	3.73	05530H6HI	Pwr Line Tm	14	1.88	09066H300	HHC Ord Gp Conv Ammo, DS/GS	67	46.8
01257H200	Cnt Spt Avn Co	135	57.42	05540H3A	Topo Plan & Cntrl Tm	19	.64	09074H100	Ord Co Ammo Conv (GS)	239	59.43
01500H2FM	Avn C&C Det	4	.9	05540H3IC	Survey Tm	15	.52	09084H100	Ord Co Ammo (Nuc)	218	76.28
03007H800	Smk Gen Co (Mech)	119	85.01	05540H3IH	Map Dist Tm	38	3.12	09248H800	Mnt Btry DS (Imprv Hawk) Mbl	138	22.82
03032H200	HHD Cntl Gp	42	.87	05540H3IU	Terrain Tm (Corps)	34	3.43	09268H800	Mnt Btry DS (Imprv Hawk) TRIAD	117	19.37
03067H100	Cml Smk Gen Co	133	27.52	05540H3IK	Terrain Tm (Div)	5	.34	09520H4AA	EOD Cntrl Center Tm	11	1.85
03087H000	NBC Co	124	11.45	05580H4ANA	Lt Tac Rft	14	5.43	09530H4EA	Ammo Maint Det	62	1.45
03107H000	NBC Def Co	154	43.03	05580H4ANC	Aslt Boat Tm	5	1.76	09540H4EA	Nucl Wpns Spt Det	30	7.30
03266H200	HHD Smk Bn	28	.89	06401H310	HBB FA Bde	155	22.76	09550H3BA	Tech Supply	21	4.41
03500H2FA	Decon Tm FA	21	5.89	06425H300	FA Bn 155 TWD	500	499.81	09550H3EB	Msl Maint Shop Cntrl	18	2.98
03500H2FB	Decon Tm FB	41	11.75	06445H410	FA Bn 8 in SP	486	410.78	09550H3ED	Tow/DRAAGON Mnt TM, DS/GS	10	1.26
03500H2LA	Recon Tm LA	4	.28	06455H300	FA Bn 155 SP	489	757.59	09550H3EK	C/VF Maint Tm, DS/GS	16	5.06
03500H2LB	Recon Tm LB	5	—	06525H300	FA Bn MLRS	461	259.72	10067H300	Water Pen and Distrib Co	97	8.77
03500H2JA	NBC Elem JA	5	—	06595H400	FA Bn LANCE	466	112.36	10116H300	HHD Water Sup Bn	51	.80
03500H2JB	NBC Elem JB	10	.07	06602H300	HBB PERSHING Bde	254	30.95	10117H300	Water Sup Co	153	16.52
05035H500	Engr Cnt Bn (Corps)	826	176.24	06625H300	FA Bn PERSHING	1130	235.65	10118H300	Water Purf Det	69	10.43
05037H500	Engr Cnt Co (Corps)	160	34.47	07500H3FA	Int Pathfinder Tm	6	.14	10202H200	HHD, Petri Gp	86	1.89
05045H100	Engr Cb Bn (Mech) (Corps)	836	404.30	08063H400	WASH	240	24.57	10206H400	HHC, Petri Pl & Tml Op Bn	84	1.83
05052H600	HHC Engr Gp	118	10.69	08111H200	HHC, MEDCOM	239	5.04	10226H500	HHD, Petri Sup Bn	54	1.11
05057H500	Engr Co ADM	196	21.46	08112H600	HHC, Med Bde	75	1.68	10227H500	Petri Sup Co	189	46.91
05058H400	Engr Cnt Spt Equip Co	241	119.51	08122H200	HHC, Med Gp	52	.83	10296H210	HHD, GREGG Bn	35	.71
05064H200	Engr Co Mbl Aslt Bridge	204	68.46	08123H100	Cnt Spt Hosp	440	3.63	10297H400	GREGG Co	101	4.05
05074H200	Engr Co Mdm Girder Brg	107	40.35	08126H300	HHD, Med Bn	39	4.37	10407H300	QM Airdrop Supply Co	283	37.09
05077H200	Engr Co, Panel Bridge	99	39.2	08127H410	Med Ambul Co	107	6.67	10417H420	Airdrop Eq Rep & Sup Co	189	6.52
05078H200	Engr Co, Fit Bridge	204	106.93	08128H400	Med Cirg Co	140	23.60	10510H5EA	Laundry Svc Tm	7	1.39
05079H200	Engr Co, Aslt Brg, Rib	182	84.71	08129H500	Med Col Co	192	1.30	10510H5EC	Pchrt/Text Remv Svc	60	.65
05101H610	HHC, Engr Bde (Corps)	159	2.93	08137H200	Med Air Ambul Co (UH-1)	194	39.80	10510H5FA	Laundry Svc Tm	7	1.39
05101H620	HHC Engr Bde (TA)	123	2.72	08147H000	Med Co, Sep Alm Bde, ACR	123	9.90	10520H5FA	Petri Sup & Ops Tm	8	1.57
05114H200	Engr Co, Constr Spt	175	98.77	08233H700	STA Hosp, 300 Bed	268	3.06	10560H6C	Petri Sup & Ops Tm	12	.21
05115H300	Engr Cnt Bn, Hwy	796	213.25	08253H700	STA Hosp, 500 Bed	393	3.42	10560H6B	Petri Sup & Ops Tm	10	6.06
05124H600	Engr Co, Dump Trk	79	42.03	08287H600	Med Sup Opt & Mn Unit	165	12.21	10560H6F	Petri Sup & Ops Tm	45	5.10
05129H500	Engr Port Constr Co	214	69.09	08303H800	Gen Hosp, 1000 Bed	705	7.33	11116H700	HHD, Signal Bn	280	32.66
05177H400	Engr Co, Pipeline Constr	181	25.36	08502H100	HHD, Hosp Center	61	.41	11117H710	Signal Spt Co	258	29.90
05201H400	HHC, Engr Cmd	257	1.63	08510H600	Field Hosp	435	7.81	11117H720	Signal Spt Co	53	1.51
05333H600	HHC Topo Bn, TA	126	7.93	08590H500	Convusc Center	279	4.76	11122H400	HHD Sig Gp	138	12.62
05337H600	Carto Co, Engr, Topo Bn, TA	146	19.06	08581H100	Evac Hosp	548	11.64	11127H700	Signal Ops Co Medium	992	70.25
05338H600	Survey Co	154	11.89	08650H0VA	Area Med Lab Det	35	1.96	11175H200	Signal Ops Bn (ADA)	115	8.32
05510H2FE	Engr FTG Tm	3	.06	08660H0RA	Med Air Ambul Tm (UH-1)	53	9.56	11257H400	Sig Co Abn SF Gp	156	103.5
05520H6GA	Engr Eqp Ops Tm	44	9.89	08660H0RE	Ground Ambul	13	.36	11302G900	HHC, Theater Comm Cmd	225	3.92
05520H6GE	Engr Eqp Ops Tm	5	3.40	08670H8HA	Dental Svc Det	59	3.29				

113038800	Sig Radio Opns Co	91	1.09	19262H420	HHC, MP Bde (Corps)	68	1.67	30026H200	HHC, MI Bn, Field Army	225	8.97
113035200	Sig Cmd Opns Bn (Theater)	395	45.94	19272H410	HHC, MP Gp (Corps)	93	6.61	30027H200	MI Co, Inter	103	1.31
113276700	Sig Op Co LG HQ	315	45.76	19272H420	HHC, MP Gp (MP Bde)	76	6.05	30028H200	MI Co, CI	133	7.27
113581300	Signal Msg Co	82	4.72	19282H500	HHC, MP PW Bde	90	1.33	30029H200	MI Co, Collection	135	7.98
113674700	Sig Co Troop Lt	107	8.68	19316H600	HHC, MP Bn	129	1.95	30034H200	MI Co, Tech Intel	149	6.31
113681400	Sig Co Troop Heavy	78	30.89	19500H2AE	C&C Tm Bn	33	.61	30049H000	MI Det, CI	55	2.85
114029700	HHC, Corps Sig Bde	180	13.2	19530H2HA	CTF Admin Overhead	16	.48	30067H200	MI Co, CI	121	2.59
114032000	TACSAICOM Co	106	16.83	19620H8GA	CID Tm	4	.15	30068H200	MI Det, Cen Rec Fac	44	.18
114056710	Sig Bn, Cmd Opn, Man Tel	520	67.63	19620H8GB	CID Det (Fid Off)	10	.26	30400H5AA	Det HQ (CI) Team	17	1.15
114057220	Sig Bn, Cmd Opn, Man Tel	502	77.21	19620H8GC	CID Det (District)	18	.46	30500H5FD	Op Con (CI) Team	6	.19
114104100	HHC, Sig Bde (TA)	94	7.24	19620H8GE	CID Det (Region)	29	.61	30500H5AC	Det HQ (Coll) Team	38	1.16
114156610	Corps Area Sig Bn (Man)	858	95.80	20500H3AC	HHD, Scout Bn (Inf)	71	8.91	30500H5AE	Gp HQ (CI) Tm	40	.6
114156620	Corps Area Sig Bn (Auto)	880	111.54	29079H010	Mnt Co Sep Armd Bde	322	78.20	30500H5AF	Gp HQ (Coll) Tm	68	1.8
114164610	HHC, Corps Area Sig Bn	158	18.11	29102H200	HHC, Spt Gp	90	3.34	30600H5AD	Bn HQ Tm	31	.85
11417H610	Corps Area Sig Co	175	19.42	29114H400	Fid Svc Co GS Fwd	122	11.26	30600H5MB	Stra Intel Tm	8	—
11423H710	Cable & Wire Co (Corps)	184	13.97	29118H100	Gen Sup Co GS	202	31.50	31102H000	HHC, Abn SF Gp	90	.52
11425H700	Corps Signal Radio Bn	685	98.69	29119H510	Repair Parts Sup Co (Corps)	251	24.05	31105H000	SF Bn, Abn SF Gp	261	.25
11500H4AC	Sig Co HQ	10	.2	29119H520	Repair Parts Sup Co, GS, COMZ	271	24.05	31127H400	Svc Co, Abn SF Gp	235	21.78
12066H210	HHD, P&A Bn (TA)	57	4.08	29127H200	Hvy Mat Sup Co, GS	183	53.19	32052H400	HHC ASA Gp	172	6.62
12066H220	HHD, P&A Bn (COSCOM)	58	4.08	29134H200	Mnt Co LE, GS, COSCOM/TA	196	13.14	32056H400	HHC ASA Bn	122	20.88
12067H510	Per Svc Co, Type A	94	3.58	29136H300	HHD, Maint Bn, DSGS, C/IT/AMCO	57	1.39	32073H400	C&P Co ASA	187	10.44
12067H520	Per Svc Co, Type B	125	3.63	29137H200	Svc Co HE, GS, COSCOM/TA	198	69.96	32083H400	ASA Opns Co (Rear)	207	10.32
12067H530	Per Svc Co, Type C	158	3.64	29139H300	Svc Co Col & Class	198	88.84	33015S600	GS PSYOPS Bn	299	21.12
12067H540	Per Svc Co, Type D	199	3.82	29146H500	HHD, S&S Bn	70	1.46	33025S600	DS PSYOPS Bn	132	13.71
12067H550	Per Svc Co, Type E	230	3.80	29147H520	S&S Co, DS	186	30.13	341021110	HHD, MI Gp, CEWI (Abn Corps)	49	2.18
12067H560	Per Svc Co, Type F	274	3.80	29209H900	S&S Co, DS	284	50.56	341071110	HHD, MI Gp	49	2.59
12067H570	Per Svc Co, Type G	311	3.87	29209H901	Maint Co Non-Div DS	215	44.80	341051120	MI BN CEWI (Corps)	588	50.90
12402H410	HHC, Personnel Cmd	869	3.96	29209H902	Aty Bn Maint Spt Tm	18	5.40	341251110	Opns Co MI Bn, CEWI	232	14.82
12402H420	HHC, Personnel Cmd	454	2.70	29209H903	Clt Engr Bn Maint Spt Tm	16	2.60	341251120	MI BN CEWI (Abn Corps)	573	58.26
12510H020	Data Proc Unit	82	2.02	29209H904	ADA Bn Maint Spt Tm	19	2.78	341251120	CEWI Aert Expl Bn	574	50.43
12570H68A	Repro Tm	8	.83	29229H000	Rec/Eval Spt Tm	7	35.15	41012H200	HHC, TA CA Cmd	257	.55
12570H68B	Repro Tm	9	1.18	29229H001	Maint Co (TMDE)	106	18.20	41201H200	HHC, Civil Aft Bde	173	2.21
12570H68C	Repro Tm	11	1.18	29229H002	Area TMDE Spt Tm KA	7	2.61	41207H700	CA TAC Spt Co	100	2.13
12570H68D	Repro Tm	14	1.18	29229H002	Calbr Ref Lab Tm KB	5	—	41500H2AB	HQ CA Co	18	.55
142031100	Area Fin Spt Cen	51	1.46	29408G900	RAOC	78	2.92	41500H2AD	HHD CA Gp	42	.78
146001FA	Jumps Tm Army	56	1.07	29449H500	Mnt Co, DS TAACOM	268	22.10	44001H800	HQB, ADCOM (TA)	138	.64
19047H400	MP Escort Guard Co	141	.76	29512H400	Labor Svc Co	166	1.26	44002H600	HHB, ADA Bde	84	2.74
19076H400	HHD, MP Bn	58	2.17	295507720	HHC, TA SPT Gp (GS)	252	2.21	44002H600	HHB, ADA Bde	82	8.67
19077H410	MP Co	177	4.43	29610H4E1	DPJ Type B	154	19.91	44086H700	HHB, ADA Bn AW, Sp	139	14.26
19077H420	MP Co, Cht Spt	176	15.16	29610H4ER	Mech & Metal Rep Tm	14	1.25	44086H700	ADA Bn, HAWK (TA)	148	95.02
19097H400	MP Sec Co	141	6.26	29630H3GR	SigntEW Equip Rep Tm, GS	10	2.84	44485H400	Radar Sec, AMVGS-7, FA	706	209.90
19103H600	MP Det, PWIC	62	.37	29630H3GS	Test Sta & ERT Tm GS	13	1.56	44510H6FA	HHB, ADA Bn (Patrol)	88	35.83
19237H400	MP Co PW Proc	78	1.10	29640H7HB	CONSEC Log Spt Tm	12	2.38	446361100	ADA Bn Chap/WULC	689	200.56
19247H400	MP Guard Co	125	.93	29670H0AA	HHC, Maint Bn (TMDE)	33	1.47	446371100			
19252H800	HHC, MP PW Cmd	110	1.78	30005H200	MI Bn, ARS, Field Army	243	25.13				
19256H500	HHC, MP Camp (PW)	297	6.14	30008H000	MI Det, Imagery Interp.	42	7.34				
19262H410	HHC, MP Bde (TAACOM)	95	1.53								

Table 2-24. Class IX CS and CSS Usage Rates (Short Tons/Year) — (Cont'd)

TOE	UNIT	STRENGTH	WEIGHT	TOE	UNIT	STRENGTH	WEIGHT	TOE	UNIT	STRENGTH	WEIGHT
51001H200	HHC, Army	640	3.56	55028H520	Trans Hwy Truck Co	99	83.13	55530H6FM	Beach Discharge Lighter Tm	29	.04
52002H410	HHC, Corps	380	19.11	55062H200	HHC, Trans Bde (COSCOM)	133	3.61	55530H6FN	LARC LX Tm	53	4.13
54022H800	HHC & Sp Tnp COSCOM	372	2.39	55067J400	Trans Lt-Mdm Tnk Co	185	76.87	55540H5GE	Tn Tfr Pt Op	16	7.12
54023H510	MMC, COSCOM-Fwd Deployed	425	10.2	55112H600	HHC, Trans Term Gp	104	2.76	55560J2JB	Cgo Doc Tm	8	.11
54412H600	HHC & Sp Troops, TAACOM	412	3.11	55116H200	HHC, Trans Term Bn	100	2.01	55560J2JC	Frt Consol & Distrb Tm	10	.78
54413H600	MMC, TAACOM	423	10.3	55117H500	Trans Term Svc Co, Bk Bulk	330	32.31	55560J2JD	Trans Contract Supv Tm	12	.29
54422H400	Area Spt Gp	194	1.81	55118J410	Trans Cargo Tfr Co	250	74.17	55560J2JL	Auto Cgo Doc	31	3.88
55002H000	HHC, TRANSOCOM	250	1.40	55129H500	Trans Hwy Boat Co	190	4.28	55580H7LA	Mort Con Tm	3	.20
55004H000	Trans Mort Con Agency	79	1.38	55157H600	Trans Fltg Craft Maint Co (GS)	228	9.11	55580H7LB	Mort Con Tm	5	.20
55006H000	Trans Mort Con Ctr, COSCOM	44	.63	55158H700	Trans Lighterage Maint Co	192	13.19	55580H7LC	Mort Con Tm	7	.20
55011H400	HHC, Motor Trans Bde	134	1.97	55167J100	Trans Mdm Hel Co	284	219.05	55580H7LD	Mort Con Tm (Region)	25	1.85
55012H600	HHD, Motor Trans Gp	61	2.56	55259H000	Hwy Hel Co	138	12.09	55580H7LE	Mort Con Tm (Air Term)	48	2.15
55016H400	HHD, Motor Trans Bn	50	1.30	55456H400	HHD, Actt Maint Bn, DS/GS	47	1.34	55580H7LH	Mort Con Tm	4	.11
55017H520	Trans Lt Tnk Co, 5 Tn	173	77.03	55459H500	Trans Actt Maint Co	339	25.59	95222J300	HHC, ATC Gp	63	2.5
55018H610	Trans Mdm Tnk Co (Cont/C60)	186	95.97	55459J300	Trans Actt Maint Co—EAD	249	41.45	95223J300	ATC Co (COMMZ)	13	1.98
55018H620	Trans Mdm Tnk Co (Perf)	176	62.60	55459J301	Aug, Reb Fw Rep Sec	11	.11	95225J300	Air Traffic Con Bn	100	10.96
55019J310	Trans Cmd Transport Co	101	7.82	55459J302	Aug, AEB Spt Plt	30	2.13	95227J300	ATC Co (Forward)	12	2.05
55028H510	Trans Hwy Tnk Co	153	83.13	55500H2AC	Company HQ	7	.53				

f. Core data are derived from SDC repair parts usage by major end item on an annual basis. The ratio of combat usage profiles to peacetime usages determines the multiplier for increasing parts requirements. Field artillery and combat tank main gun requirements were estimated, based on the average round per tube per day rate and added. When specific consumption data were not obtained, proportional ratios generated by SDC were applied to the items as a percentage of gross weight.

g. The rationale for distributing the average consumption by level of activity and tonnages by maintenance level is shown below. The average or mean usage rate is equivalent to light activity.

TOE 87000J430
UNIT Armor Division (6 × 4 MI/BFVS)
STRENGTH 17002
AVG STON/DAY 41.82

	MOD- HEAVY	ERATE	LIGHT	SERVE	UN- COMMITTED
Median	.87	62.5	.37	.12	.06
Commitment					
Weighted Avg	2	1.333	1	.28	.19
Total Tons/Day	83.64	55.75	41.82	11.71	7.95

Total Lbs/P/Day 9.84 6.56 4.92 1.38 .93
Div 46.84 31.22 23.42 6.56 4.45

Consumption
(Less GS) in
Tons/Day

(1) In addition to the annual mean usage, consumption is further divided down to estimates by maintenance level.

Unit = .06
Intermediate (Direct Support) = .5
Intermediate (General Support) = .44

(2) As an example: the above division consumes 55.75 tons/day at moderate commitment. Distribution by level is: 3.35 (Unit), 27.88 (Intermediate (DS)), and 24.53 (Intermediate (GS)).

h. Supplemental factors:

(1) Standard average for ALOC/non-ALOC cargo delivery is 30 percent ALOC and 70 percent non-ALOC. To estimate supply company work load for DS/GS purposes, use the non-ALOC factor of .7 (i.e., corps daily consumption is 250 STON). DS issue would

be 250 × .7 or 175 STON. The other 75 STON is ALOC-deliverable.

(2) Work-load factors are at least double consumption rates (i.e., one issue and one receipt).

(3) Stockage buildup would increase rates as illustrated:

Armor division at light level of commitment (1):
41.82 STON/day × DAY $\frac{5\text{-day stocks}}{30\text{-day stocks}}$ =

41.82 × .17 = 7.11 + light level
of commitment (1) = 48.93 STON

2-20. CLASS X.

Material to support nonmilitary programs, not included in Classes I through IX, is contained in this category. Agricultural and economic development programs are examples of the type of projects that may be supported by Class X supplies. A planning factor of pounds per person per day is not appropriate for this class of supply.

SECTION VI. SITUATIONALLY DEPENDENT COMBAT PLANNING

2-21. GENERAL.

a. This section provides guidance to commanders and staff officers in estimating materiel losses and replenishment needs. In general, estimates will be based on the level of operation the fighting force is experiencing over a period of time. Consumption rates should be modified, as appropriate, to reflect variables such as mission, weather, terrain, relative strengths of opposing forces, level of operation, and type of conflict. When available, actual experience factors should be used.

b. The planning factors in this chapter generally apply to a force fighting in a temperate zone, over representative terrain, against a modern, well-trained enemy force. Adjustment in factors is needed when conditions differ significantly from the conditions described.

c. In general, the senior headquarters in the theater or appropriate army group headquarters, if applicable, will plan considerably in advance and for more than one tactical action. The division, corps, and, when extant, numbered field army will plan in detail for the execution of an assigned mission. At the same time, these organizations conduct longer range planning for "prepare to" missions. Logistics planners should "average out" the conditions in the period they are planning for.

d. Planners must be aware of the potential effect of force size on planning factors and ensure that appropriate planning factors are used. Planners should consider that the planning factors for an item of materiel may not be the same for corps- and division-sized forces. For example, when considering all the 155-millimeter howitzers in a corps-sized force, an appropriate planning factor may be 100 rounds per weapon per day during a protracted period. However,

for a division in the force, the appropriate planning factor might be twice the corps rate or 200 rounds per 155-millimeter howitzer per day for the same period. This situation can occur during a period when one division of the corps is experiencing a heavy level of operation while other major combat elements of the corps are experiencing light or moderate levels of operation.

e. Another example of the effect of force size on consumption can be drawn from bulk petroleum (Class III). When preparing the estimate of POL required to carry out the battle plan, the planner must envision the dynamics which occur in getting started as well as conducting the battle. The battle plan may call for defense with a single division covering the anticipated enemy breakthrough sector and with two or more divisions entering the battle at the appropriate time to concentrate the defensive force at the intended point of breakthrough. The period after the enemy attack has begun until all defending divisions are fully deployed and engaged in the main battle area (MBA) is characterized by extremely high ammunition consumption and low to moderate POL consumption by the single division initially attacked. For the same period, there is low ammunition consumption and very high POL consumption by the divisions moving into the MBA. Under these circumstances, it would not be necessary or appropriate to assume the same consumption rate for all divisions when estimating POL and ammunition requirements. A circumstance such as this calls for more refined planning procedures.

2-22. SUPPLY DISCIPLINE. Materiel availability in war is limited. Commanders and planners must calculate requirements based on disciplined control of expenditures and enforced standards of conservation. Skill, judgment, controls, and supervision are required to guard against unnecessary expenditures

and accumulation of nonessential stocks. Austerity and success in battle are mutually supporting because materiel saved becomes available for us when really needed. Key to the practice of austerity are —

a. Establishment of priorities.

b. Determination of realistic replacement and expenditure rates.

c. Dependence on other services for assistance in providing fire support.

d. Optimum use of all assets.

e. Adequate security for stocks and lines of communication.

f. Ensuring that stocks can be moved as required.

g. Using host country resources to the maximum extent permitted.

h. Prompt evacuation or disposal of unserviceable, obsolete, or excess supplies.

i. Willingness to assume a prudent risk.

j. Sound materiel management procedures with high asset visibility.

2-23. LEVELS OF OPERATION. These levels are determined based on the percentage of friendly force involvement (maneuver and fire support), the intensity of combat, and the probable commitment of next higher headquarters reserves.

2-24. INTENSITIES OF CONFLICT.

- a. High-intensity conflict. War between two or more nations and their respective allies, if any, in which the belligerents use the most modern technology and all resources in intelligence; mobility; firepower (including nuclear, chemical, and biological weapons); command, control, and communications; electronic warfare; and combat service support.
- b. Mid-intensity conflict. War between two or more nations and their respective allies, if any, in which the belligerents use the most modern technology and all resources in intelligence; mobility; firepower (excluding nuclear, chemical, and biological weapons); command, control, and communications; electronic warfare; and combat service support for limited objectives under definitive policy limitations as to the extent of destructive power that can be used or the extent of geographic area that might be involved.
- c. Low-intensity conflict.

(1) Type A. Internal defense and development assistance operations involving actions by US combat forces to establish, regain, or maintain control of specific land areas threatened by guerrilla warfare, revolution, subversion, or other tactics aimed at internal seizure of power.

(2) Type B. Internal defense and development assistance operations involving US advice, combat support, and combat service support for indigenous or allied forces engaged in establishing, regaining, or maintaining control of specific land areas threatened by guerrilla warfare, revolution, subversion, or other tactics aimed at internal seizure of power.

2-25. CLASS III (COMBAT VEHICLE POL REQUIREMENTS). On the modern battlefield, tracked vehicles can be expected to operate 16 to 24 hours per day. They will travel different distances under different levels of operation.

2.26. CLASS VII (TANK LOSSES: ARMORED/MECHANIZED/INFANTRY FORCE).

- a. A tank loss is any incident that precludes the vehicle from performing its assigned combat mission. The loss may be caused by battle damage, crew failure, or maintenance failure. The loss rate is dependent on the theater of operations, force structure, terrain, condition, and state of training of troops, enemy-to-friendly force ratio, and other factors to include the maintenance and supply system.
- b. The purpose of Table 2-25 is to give the planner an estimate of the anticipated loss rate early in the battle before representative combat data are available. Considerations used in developing the loss table included a limitation to a conventional European conflict, a threat to friendly force ratio of three- or four-

to-one, and the assumption that sufficient maintenance personnel would be in the theater of operations to carry out effective cannibalization and repair. The tank losses listed in Table 2-25 are not necessarily permanent in nature. For planning purposes, planners using the data in this table should be aware that up to 80 percent of the losses are repairable by unit and intermediate maintenance personnel. Based on maintenance simulations, the average repair time for repairable losses is 10 man-hours. The problem posed to the force planner/developer becomes one of determining the maintenance capability to be designed into the force.

c. Example: A division commander decides to constitute a division covering force into which 30 to 50 percent of the maneuver elements will be placed. The covering force, in its mission to delay, can be expected to have a loss rate of 10 percent.

Table 2-25. Main Battle Tank Loss¹

	ARMORED/MECHANIZED DIVISION					
	DELAY (Covering Force Area)			DEFENDED (Main Battle Area)		
	Level of Commitment	Light	Moderate	Heavy	Moderate	Heavy
First day		12%	30%	73%	22%	54%
Second day		13%	18%	8%	12%	14%
Third day		6%	11%	6%	6%	10%

FOOTNOTE:

¹Up to 80 percent of the losses are repairable by unit or intermediate maintenance personnel. Based on maintenance simulations, the average repair time for the repairable losses is 10 man-hours.

ted to be heavily committed. Thus, the covering force commander can expect to lose 70 to 75 percent of the operational tanks the first day of battle. The division commander, with the covering force now committed, can consider the unit moderately committed by definition. Thus, the commander can expect to lose 30 percent of the division assets of operational tanks during the first day. (Second- and third-day percentage loss figures must be applied to the number of operational tanks on hand the first day of commitment.) When a unit has been engaged over a period of time exceeding 3 days, a protracted period rate may be determined from experience.

2-27. AIRDROP RESUPPLY.

a. Table 2-26 is designed for use in developing airdrop resupply requirements. It is not intended for use in planning airborne assault operations. Airdrop resupply will take place primarily in the division area, and the table is based on tonnages consumed in the division area. Planning factors and the subsequent tonnage to be airdropped represent average daily requirements.

b. To determine the airdrop tonnage requirement for a division, the staff planner must first determine the gross tonnage required in the division area (logical region 1) by individual classes of supply to include water. For example, if the daily Class I requirement in a division area in northern Europe were 30 STON, the daily airdrop requirement for Class I would be $30 \times .0110$ (percent of gross requirement) or .33 STON. This same procedure would be followed for each class of supply and then totaled to give the daily airdrop requirement for that division. The corps airdrop requirement would be determined by totaling the division requirements.

c. The remainder of the information in the table can be used by the staff planner, if needed, to assist in determining the types of airdrop equipment needed. In the example above, the daily Class I airdrop requirement for a division in northern Europe was computed at .33 STON. The table reflects that 17 percent of the Class I daily airdrop requirement will be by low-velocity platforms ($.17 \times .33 = .056$ STON) or .056 STON. This same procedure would be followed for each class of supply and then be totaled to give that

portion of the airdrop requirement to be delivered by low-velocity platforms. Similar computations would be made for low-velocity containers, high-velocity containers, low-altitude parachute extraction, and free drop. This information can be used by staff planners responsible for determining the quantity and types of air delivery equipment needed for contingencies and war reserves.

d. These planning factors can be used by staff planners at all levels depending on the need. For example, they could be used to support a special forces operation or a separate brigade operation within a division. Additionally, they can be used to assist staff planners in formalizing anticipated airdrop work load, force structure needed to support the work load, equipment stockage levels, aircraft requirements, and airdrop delivery method.

Table 2-26. Airdrop Resupply Planning Factors

Supply Class	% of Gross Rqmts	Low-Velocity Platforms (%)	Low-Velocity Containers (%)	High-Velocity Containers (%)	Low-Altitude Parachute Extraction (%)	Free Drop
NORTHERN AND CENTRAL EUROPE						
I	1.10	17	70	10	3	0
II	.30	12	42	30	6	10
III	1.79	34	31	6	29	0
IV	.66	42	15	10	21	12
V	3.26	16	59	8	17	0
VII	.39	60	2	0	38	0
VIII	.58	14	70	5	11	0
IX	.58	16	72	3	8	1
Water	.15	35	38	7	20	0
SOUTHWEST ASIA (SWA) AND SOUTHERN EUROPE						
I	1.90	20	72 ¹	8	0 ⁴	0
II	.52	14	52 ²	24	0 ⁵	10
III	2.68	27	38	5	30	0
IV	1.22	38	13	8	28	13
V	4.81	21	58	3	18	0
VII	.54	68	2	0	30	0
VIII	.82	15	80 ³	5	0 ⁶	0
IX	.65	14	69	4	12	1
Water	2.62	34	49	7	10	0
KOREAN PENINSULA						
I	1.58	10	75	13	2	0
II	.42	10	53	25	2	10
III	1.84	20	62	10	8	0
IV	.78	27	37	14	9	13
V	3.70	15	76	5	4	0
VII	.34	82	4	0	14	0
VIII	.69	9	82	7	2	0
IX	.65	11	80	6	2	1
Water	.43	28	59	10	3	0

CENTRAL AMERICA, PACIFIC AREA LESS KOREA, AND LOW-INTENSITY AREAS

	A22	A7/A21				
I	2.24	18	59	10	13	0
II	.51	10	47	10	23	0
III	2.91	31	54	6	5	10
IV	1.01	26	36	5	13	0
V	4.51	20	50	17	9	12
VII	.49	61	25	5	4	0
VIII	.69	12	74	5	6	0
IX	.68	16	68	5	8	0
Water	.98	24	58	5	7	1

FOOTNOTES:

- ¹Change to 69 for Southern Europe
- ²Change to 46 for Southern Europe
- ³Change to 70 for Southern Europe
- ⁴Change to 3 for Southwest Asia
- ⁵Change to 6 for Southwest Asia
- ⁶Change to 10 for Southwest Asia

CONSIDERATIONS:

- Future conflicts may erupt on short notice in remote areas without existing logistics facilities or pre-positioned war reserve stocks.
- Rapid deployment of forces by air may be required.
- Airdrop may be required beginning with the onset of hostilities.
- Units will deploy with basic load and PLL.
- Increased reliance will be placed on airdrop as a resupply means.
- Factors should be based on theater requirements and limitations, not unit capabilities.
- Planning factors will represent average daily airdrop resupply requirements.
- Initial airdrop of accompanying equipment and supplies in support of airborne assault forces is not included.
- Transportation priority will be surface, air-land, and airdrop.
- Daily airdrop resupply requirements will be expressed in short tons.
- All supply classes will be required.
- Airdrop will be employed primarily in the division area (logical region 1).
- Daily resupply tonnage will be computed using planning factors for each supply class in accordance with Army force planning data and assumptions (AFPPDA).

e. Table 2-27 can be used by staff planners to compute estimated quantities of air delivery equipment to be retrograded. Figures are available for airborne assault and normal resupply operations.

f. For instance, if 200 G-12D parachutes and 200 A-22 containers are air-dropped in a resupply operation, it can be that 50 G-12s and 50 A-22s will be retrograded (25 percent of 200 = 50).

g. Next, staff planners need to determine the

condition of the retrograded items. To do this, planners simply apply the percentage in paragraph b(2) of the table to the estimated number of retrograded items. In the example, 50 G-12D parachutes and 50 A-22 containers were retrograded. Of these, it would be anticipated that 16 would be serviceable ($.32 \times 50 = 16$), 14 repairable ($[(.15 + .14) \times 50 = 14.5]$, and 20 would be salvagable ($.39 \times 50 = 19.5$). This information can be used by staff planners in determining the flow of supplies (air delivery equipment) needed to sustain the operation.

h. Paragraph c of the table can be used by staff planners to estimate the weight of air delivery equipment to be retrograded. For instance, if the unit is receiving a resupply airdrop of 16 tons of supplies in A-22 containers, the weight of the air items involved is estimated by multiplying 16 tons $\times .10 = 1.6$ tons. Then from paragraph a of the table, note that an estimated 25 percent of the air delivery equipment will be recovered/evacuated, so the estimated back-haul requirement is .4 tons ($.25 \times 1.6 = .4$).

Table 2-27. Air Delivery Equipment Item Recovery Rates

1. Percent air delivery equipment items recovered/evacuated:	
a. Airborne assault — 39%	
b. Resupply operations — 25%	
2. Condition of air delivery equipment items recovered/evacuated:	
a. Airborne assault	
(1) Serviceable — 35%	
(2) Repairable — 16% unit-level maintenance; 14% intermediate	
(3) Salvage — 35%	
b. Resupply operations	
(1) Serviceable — 32%	
(2) Repairable — 15% unit-level maintenance; 14% intermediate	
(3) Salvage — 39%	
3. Ratio of air delivery equipment weight to total rigged weight:	
a. Containers — 10%	
b. Platform loads — 28%	

CHAPTER 3

TRANSPORTATION AND MOVEMENT PLANNING

SECTION I. PLANNING CONSIDERATIONS

3-1. INTRODUCTION. This chapter contains detailed planning data on the capabilities and methods of computing transportation requirements. It presents a separate section on each of the major means of transportation required to support military operations by motor, air, water, and rail. It discusses the principles of transportation and movement, the transportation planning process, transportation unit capabilities, the vehicle payload capacities, air transport planning, and rail transport planning. For details on transportation movement and planning, see FMs 55-1, 55-2, 55-10, and 55-12.

3-2. PRINCIPLES OF TRANSPORTATION AND MOVEMENT. The transportation service is guided by a set of principles; that is, centralized control; regulated, fluid, and flexible movement; and maximum use of carrying capacity that applies to all modes of transportation at all levels of the command structure. If transportation capability is to be fully used, these principles must be employed during the planning and execution phases of all transportation operations.

3-3. TRANSPORTATION PLANNING PROCESS. The transportation planning process is followed regardless of the type of transportation. It should follow this flow:

- a. Determine transportation requirements by —
 - (1) Type, amount of cargo, and distance to be moved.
 - (2) Unit's capability to meet requirements with organic assets.
 - (3) Special requirements.

b. Determine resources by —

- (1) Types of transportation units available.
- (2) Characteristics and capability of each mode of transportation.
- (3) Capabilities of civilian and host nation transportation assets.
- c. Balance requirements and resources by —

(1) Coordinating with other services for their support of the operation.

(2) Preparing statements of total requirements showing origin, destination, required delivery date (RDD), weight, quantity, and class of supply for each shipment.

(3) Establishing transportation work load for each mode.

(4) Combining all modes into a single, integrated transportation system.

(5) Using air movement for programmed or non-programmed priority moves only.

d. Determine critical points early in the planning process by —

- (1) Identifying restrictions such as ports, terminals, and facilities.
- (2) Identifying alternate routes.

e. Coordinate and redefine the plan, and continuously coordinate with other planners for changes in mission or other elements of the operation.

3-4. REQUIREMENTS.

a. The orderly movement of cargo depends on the transmission of thorough transportation requirement information through the transportation system. On the recommendation of the movement control agency (MCA) or senior transportation headquarters, the theater commander will specify the form to be used to transmit this information. A sample format of a form to transmit this information is at Table 3-1. This form should be standard for the command. The information on the form should address the following:

(1) Materiel — stated in terms of class of supply and estimated tonnage either in short tons (STONS) or measurement tons (MTONS). Special handling requirements should be expressed in units, dimensions, STONS, or in the case of cold shipments, the shipment temperature required.

(2) Personnel — indication of personnel categories; for example, troops, civilians, patients, and prisoners of war.

(3) Origin and destination — information should include both specific shipping and receiving agency designation and the location by name and map coordinates. Unit identification codes will be used.

b. Units requiring additional surface transport support to carry out a movement should submit requests for movement according to theater directions. When operating with NATO nations, requests must be submitted according to STANAG 2156.

3-5. CAPABILITIES. Unit transport capabilities must be submitted by the operator to the MCA for planning purposes according to published schedules. The forecast of movement capability will normally be submitted to the MCA through command channels of the transportation command (TRANSCOM). However, daily revision of capability information for programming will normally flow directly from the TRANSCOM to the MCA.

3-6. RESTRICTIONS. A survey of the total transportation system will be accomplished early in the

planning process to determine restrictions that will slow or stop the annual movement of cargo. Supply facilities, aerial ports, or terminal transfer points are areas that can restrict cargo flow to the point where they become critical. Areas identified as restrictions will be corrected or alternative plans will be created to bypass the problem area. If any one critical point becomes an absolute limitation, then that point will be a limitation for the whole system.

3-7. MANAGEMENT. Effective management of the

transportation system will result in the maximum tonnage moved with a minimum expenditure of transportation assets. Developing schematics will assist the manager in planning and executing a movement program. The schematic will portray total shipping requirements and available transport capabilities as they relate to the actual distribution system. One schematic is prepared for requirements, and a separate transport schematic is prepared for each available mode. Preparation of the various schematics is described in FM 55-10.

Table 3-1. Movement Requirement Information Format

Trans Priority	Available For Shipment	RDD	Commodity Code	Cargo Description	Origin	Destination	Weight	Cube	Remarks
2 ¹	4155 ²	4160 ³	870 ⁴	2-M113 ⁵	AT1113 ⁶	WK87AY ⁷	18.8 ⁸	2,000 ⁹	None ¹⁰

FOOTNOTES:

¹According to DOD Reg 4500.32R, one of the following transportation priorities (TPs) will be used:

TP 1 4 days from request to delivery

TP 2 5 days from request to delivery

TP 3 10 days from request to delivery

TP 999 As soon as possible

²Julian date that cargo is available for pickup.

³RDD Julian date by which cargo must be delivered to ultimate consignee.

⁴DOD Reg 4500.32R contains a listing of commodity codes.

⁵Clear description of cargo.

⁶Six-character activity address code of the shipping unit.

⁷Six-character activity address code of ultimate consignee.

⁸Total weight (expressed in STONS)

⁹Total cube.

¹⁰Includes special handling requirements.

SECTION II. MOTOR TRANSPORT PLANNING

3-8. GENERAL PLANNING FACTORS.

a. Motor transport planning, particularly in its earliest stages, must often be based on broad planning factors and assumptions. However, because of the varied services performed, the type of load carried, and the varied terrain features over which motor transport operations are conducted, general planning factors should be used with caution and only in the absence of specific data on the local situation. FMs 55-15 and 55-30 and STANAGs 2155 and 2156 pertain to this section.

b. When specific data are not available, the following factors are used in motor transport planning to compute vehicle and truck company requirements:

(1) Average number of assigned task vehicles not in maintenance and therefore available for daily operations include —

(a) Operational short range — 83 percent (maximum sustained effort; use only for all-out effort, and then only for a period of less than 30 days).

(b) Long-range planning — 75 percent.

(2) Anticipated payload per vehicle. Previously, vehicle payload was classified as being either off-road or highway. The planning factor or allowable load for highway operations exceeded those loads for off-road operations. Now only the off-road payload factor is used.

(3) Daily round trips that a vehicle averages (these vary with running and delay times) include —

(a) Line haul — one per operating shift.

(b) Local haul — four per day (two per operating shift).

(4) One-way distance that cargo is to be hauled from which round-trip mileage may be computed as follows:

(a) Line haul — 90 miles (144 kilometers (km)) one way per operating shift.

(b) Local haul — 20 (32 km) one way per trip.

(5) Average numbers of miles (km) covered in an hour, including short halts during the period of movement, are listed below. (NOTE: Under road conditions, not only the surface must be considered, but also terrain, weather, and hostile activity which may affect rate of march.)

(a) Poor roads — 10 miles (16 km) in the hour.

(b) Good roads — 20 miles (32 km) in the hour.

(6) Turnaround time — time consumed in round-trip movement, including delays.

(7) Delay — time consumed in loading/unloading and relay time in line-haul relay operations. (Time for halts and delays en route, such as mess halts and ferrying operations which can be anticipated but are not included in the rate of march/miles in the hour, must be included in delay time.)

(a) Straight trucks — 2.5 hours loading and unloading time per round trip (straight haul).

(b) Semitrailers — 2.5 hours loading and unloading time per round trip (straight haul).

(c) Container transporters — 1.5 hours loading and unloading time per round trip (straight haul).

(d) Truck tractors in semitrailer relay operations — 1 hour per relay (round trip per line-haul leg).

(8) Number of hours per day in which vehicles with drivers are normally employed include —

(a) One shift — 10 hours.

(b) Round-the-clock (two shifts) — 20 hours.

(9) Unit lift and daily lift — unit lift is the amount of cargo which a truck company can move at one time; daily lift is that which it can move in a day, making a number of trips.

(10) Ton miles and passenger miles — the product of the number of tons or passengers times the number of miles moved.

3-9. UNIT AND VEHICLE CAPABILITY ESTIMATES.

a. For planning purposes, and in the absence of other specific operational data, motor transport unit capability estimates based on tables of organization and equipment (TOE) capabilities are shown in Tables 3-2 through 3-6.

b. Vehicle capabilities given in Table 3-6 may be used in conjunction with other planning factors.

Table 3-2. Unit Capability Estimates—Local Hauls

(Vehicle availability × average tons per vehicle × trips per day = short-ton capability per day.)

	No. Vehicles Available (75% of Total Authorized)	Average STON Carried Per Trip	No. Trips	Total STON Cargo Moved Per Day
Light truck company (2-1/2 ton truck)	45	45	2-1/2	450
Light truck company (5-ton truck)	45	5	4	900
Medium truck company (cargo) (12-ton stake and platform)	45	12	4	2,160
Medium truck company (cargo)	45	15	4	2,700
Flatbed break bulk/transporter (22-1/2-ton trailer)	45	25	4	4,500
Medium truck company (cargo)	45	5,000	4	90,000 gal.
Flatbed break bulk/transporter (34-ton trailer)	45	6	4	1,080
Medium truck company (petroleum) (5,000-gallon tanker)	18	40	4	2,880
Medium truck company (freeter) (7-1/2-ton reefer van)	45	2-1/2	4	450
Heavy truck company (60-ton semitrailer)	8	12	4	384
Light-medium truck company (2-1/2-ton truck) (12-ton stake and platform)				834
Total light-medium truck company				

Table 3-3. Unit Passenger Capability Estimates — Local Hauls

(Vehicle availability × passengers per vehicle × trips per day = passenger capability per day.)

	No. Vehicles Available (75% of Total Authorized)	Average Passengers Carried Per Trip	No. Trips	Passengers
Light truck company (2-1/2 ton truck)	45	20	4	3,600
Light truck company (5-ton truck)	45	20	4	3,600
Medium truck company (cargo) (12-ton stake and platform) ²	45	50	4	9,000
Light-medium truck company (2-1/2-ton truck) (12-ton stake and platform) ²	45	20	62	5,400
	8	50	62	7,800
Total light-medium truck company				13,200

FOOTNOTES:

¹Recommended for emergency use only; no troop seats provided.

²Number of trips based on employment of unit in tactical situation. For general troop movements, planner should plan on four trips per day.

Table 3-4. Unit Tonnage Capability Estimates — Line Hauls

(Vehicle availability × average tons per vehicle × trips per day = short-ton capability per day.)

	No. Vehicles Available (75% of Total Authorized)	Average STON Carried Per Trip	No. Trips	Total STON Cargo Moved Per Day
Light truck company (2-1/2 ton truck)	45	2-1/2	2	225
Light truck company (5-ton truck)	45	5	2	450
Medium truck company (cargo) (12-ton stake and platform)	45	12	2	1,080
Medium truck company (cargo) (22-1/2-ton flatbed break bulk/transporter)	45	15	2	1,350
Medium truck company flatbed break bulk/transporter (34-ton trailer)	45	25	2	2,250
Medium truck company (petroleum) (5,000-gallon tanker)	45	5,000	2	450,000
Medium truck company (reefer) (7-1/2-ton reefer van)	45	6	2	540
Heavy truck company (60-ton semitrailer)	18	40	2	1,440
Light-medium truck company (2-1/2-ton truck)	45	2-1/2	2	225
(12-ton stake and platform)	8	2-1/2	2	192
Total light-medium truck company				417

Table 3-5. Unit Passenger Capability Estimates — Line Hauls

(Vehicle availability × passengers per vehicle × trips per day = passenger capability per day.)

	No. Vehicles Available (75% of Total Authorized)	Average Passengers Carried Per Trip	No. Trips	Passengers
Light truck company (2-1/2-ton truck)	45	16	2	1,440
Light truck company (5-ton truck)	45	18	2	1,620
Medium truck company (cargo) (12-ton stake and platform) ¹	45	50	2	4,500
Light-medium truck company (2-1/2-ton truck)	45	202	2	1,800
(12-ton stake and platform) ²	8	50	2	800
Total light-medium truck company				2,600

FOOTNOTES:¹Recommended for emergency use only; no troop seats provided.²Number of personnel per vehicle based on employment of unit in tactical situation. For general troop movements, planner should recompute using 16 troops per vehicle.

Table 3-6. Vehicle Payload Capacities for General Planning

Vehicle	Nomenclature	On/Off Road Payload (lbs)	Towed Load (lbs)	Crew/Passenger ¹	Capacity
CUCV M1009	Truck, Utility, Tactical 3/T 4 x 4	1,200	1,070	1/3	100 w/2p 50 w/4p
CUCV M1008	Truck, Cargo, Tactical 5/4T 4 x 4	2,900	3,000	1/9	240
CUCV M1028	Shelter Carrier, Tactical 5/4T 4 x 4	3,600	3,000	3/0	NA
CUCV M1031	Chassis, Tactical 5/4T 4 x 4	3,950	3,000	3/0	NA
CUCV M1010	Ambulance 5/4T 4 x 4	2,080	NA	2/4 litter or 8 ambt	NA
HMMMW M998/1038	Truck, Util, Cargo Tactical Troop Carrier 5/4T, 4 x 4	2,500	3,400	1/9	215
HMMMW M1037	Truck Utility, S-250 Shelter Carrier 5/4T 4 x 4	3,600	3,400	2/0	NA
HMMMW M996	Truck, Ambulance 2 litter 5/4T 4 x 4	2,500	NA	2/2 litter or 4 ambt	NA
HMMMW M997	Truck, Ambulance 4 litter 5/4T 4 x 4	2,500	NA	2/4 litter or 8 ambt	NA
M939 M923/4/5/6	Truck, Cargo LWB Tactical 5T 6 x 6	10,000	15,000	2/20	411 cu ft
M939 M927/8	Truck, Cargo XLWB Tactical 5T 6 x 6	10,000	15,000	2/0	597 cu ft
M939 M931/932	Truck, Tractor Tactical 5T 6 x 6	75,690 ²	M127/M871	2/0	NA
M871	Semitrailer Flatbed Break Bulk Transporter 22-1/2T	30,000	NA	NA	855 cu ft
M915	Truck, Tractor Line Haul 6 x 4	105,000 ²	M871/M872	2/20	NA
M915A1	Truck, Tractor Line Haul 6 x 4	105,000 ²	M871/M872	2/20	NA
M916	Truck, Tractor Line Haul 20T 6 x 6	126,000 ²	M172/M870	2/0	NA
M920	Truck, Tractor Line Haul 20T 8 x 6	135,000 ²	M870	2/0	NA
M872	Semitrailer, Flatbed Break Bulk Container	68,000	NA	NA	1,173 cu ft
M172A1	Semitrailer, Low Bed 15-25T	50,000	NA	NA	NA
M870	Semitrailer, Low Bed 40T	80,000	NA	NA	NA
M747	Semitrailer, Low Bed 60T	120,000	NA	NA	NA
HEMTT M977	Truck, Cargo Heavy	20,000	28,000	2/0	540 cu ft
	Expanded Mobility 10T 8 x 8				
HEMTT M985	Truck, Cargo, MLRS Heavy	22,000	30,000	2/0	540 cu ft
	Expanded Mobility 11T 8 x 8				
HEMTT M978	Truck Tank, Fuel Servicing	2,500 gal	28,000	2/0	NA
	Heavy Expanded Mobility 2,500 gal 8 x 8				
	Automobile, Sedan, Light	NA	NA	4 ²	NA
M113	Bus, Convertible, 37-Passenger	NA	NA	37 or 18 litter	NA
	Carrier, Personnel, Full-Track Armored	NA	NA	11	
M119	Semitrailer, Cargo Van, 6T, 2-Wheel	12,000	NA	24 ³	1,020 cu ft
M146	Semitrailer, Shop Van, 6T, 2-Wheel	12,000	NA	NA	1,675 cu ft
M118	Semitrailer, Stake, 6T, 2-Wheel	12,000	NA	24 ³	1,130 cu ft
	Semitrailer, Reefer, 7-1/2T, 2-Wheel	12,000 ⁴	NA	NA	790 cu ft
	Semitrailer, Van, 10T, 4-Wheel		NA	50 ³	1,355 cu ft
M127A1	Semitrailer, Cargo, 12T, 4-Wheel	24,000	NA	50 ³	884 cu ft
	Semitrailer, Low Bed, 12T, 25 Ft		NA	NA	200 sq ft
M129	Semitrailer, Supply Van, 12T, 4-Wheel	24,000 ⁴	NA	50 ³	1,342 cu ft
M172	Semitrailer, Low Bed, 15T, 4-Wheel	30,000	NA	NA	320 sq ft

Table 3-6. Vehicle Payload Capacities for General Planning — (Cont'd)

Vehicle	Nomenclature	On/Off Road Payload (lbs)	Towed Load (lbs)	Crew/Passenger ¹	Capacity
M15A2	Semitrailer, Truck Transporter, 50T, 8-Wheel	100,000 ⁴	NA	NA	NA
M162	Semitrailer, Low Bed, 60T, 8-Wheel	120,000	NA	NA	204 sq ft
M131A2	Semitrailer, Truck, Gas, 5,000-gal, 4-Wheel	5,000 gal ⁴	NA	NA	NA
	Trailer, Amphibious, Cargo, 1/4T, 2-Wheel	500	NA	NA	60 cu ft
	Trailer, Cargo, 3/4T, 2-Wheel	1,500	NA	NA	175 cu ft
	Trailer, Cargo, 1-1/2T, 2-Wheel	3,000	NA	NA	283 cu ft
	Trailer, Ammunition, 2T, 2-Wheel	4,000	NA	2	66 cu ft
	Trailer, Utility, 1/4T, 4×4	800	1,500	8	160 cu ft
	Truck, Cargo, 3/4T, 4×4	1,500	NA	20 ⁵	408 cu ft
M220	Truck, Cargo, 2-1/2T, 6×6	5,000	6,000	20 ⁵	67.5 cu ft
M292	Truck, Dump, 2-1/2T, 6×6	5,000	6,000	NA	NA
M217	Truck, Shop, Van, 2-1/2T, 6×6	5,000	6,000	NA	NA
M222	Truck, Shop, Van, 2-1/2T, 6×6	5,000	6,000	NA	NA
	Truck, Tank, Gas, 2-1/2T, 6×6	750 gal	NA	NA	NA
	Truck, Tank, Water, 2-1/2T, 6×6	1,000 gal	NA	NA	NA
	Truck, Cargo, 5T, 6×6 (Single Tires)	10,000	15,000	20 ⁶	550 cu ft
	Truck, Cargo, 5T, 6×6 (Dual Tires)	10,000	15,000	20 ⁶	550 cu ft
	Truck, Dump, 5T 6×6	10,000	15,000	15 ⁷	135 cu ft
M125	Truck, Cargo, Prime Mover, 10T, 6×6	20,000	30,000	NA	496 cu ft

FOOTNOTES:

- ¹Based on 18 inches per person. Does not include driver or assistant.
²Less individual field equipment.
³Recommended for emergency use only. No troop seats provided.
⁴Limited or no off-road capability.
⁵For short hauls; reduce to 16 for long hauls.
⁶For short hauls; reduce to 18 for long hauls.
⁷GCWR = Gross combined wheel rate.

c. A transport mission may require the movement of a number of specific loads consisting of one or more items which may or may not be packaged (aircraft engines, missile components) and which — because of their peculiarities in size, shape, cube, or weight — involve a variation in the normal planning process to determine vehicle requirements for the operations. In such a case, vehicle requirements may be determined through test-loading or by using operational data available from previous, similar operations. If test-loading is not feasible or if operational data are unavailable, vehicle requirements may be determined using the method discussed below.

(1) First, determine the number of items that can be transported by one vehicle. This can be computed by using method (a) cargo weight, or (b) cargo cube, or if the circumstances warrant, by using both methods to arrive at an optimum figure. Brief descriptions of the two methods follow:

(a) Vehicle payload capacity.

Weight of item
= Number of items, by weight, that may be loaded onto one vehicle.

(b) Vehicle cargo compartment cube.

Cube of item

= Number of items, by cube, that may be loaded onto one vehicle.

(2) Secondly, using the appropriate single vehicle load (the lesser amount of methods (a) and (b) when vehicle capacity is figured both ways), compute the number of vehicles required as follows:

$$\frac{\text{Number of items to be transported}}{\text{Number of items that can be loaded into one vehicle}} = \text{Vehicles required}$$

The figure for the "Number of items to be transported" may be a one-time lift or a day-to-day lift depending on the mission. When the vehicle load capacity is computed both ways, use the lesser of the results obtained by using methods (a) and (b) because if (a) is the lesser, it indicates that the weight of the computed load will exceed the vehicle payload capability before all available cargo space is filled. If (b) is the lesser, it indicates that the computed cargo load will cube out (exceed the cubic cargo space available in the vehicle) before it exceeds the vehicle payload capacity.

d. The vehicle payload and the cubic capacity of the vehicle cargo compartment may be obtained from the vehicle data plate of vehicle technical manual. How-

Table 3-7. Highway Tonnage Capabilities

Highway Type	Daily Tonnage Forward (STON)		Reductions Applicable to Various Conditions (Percentage)					
	Optimum Dispatch Route	Supply Traffic Zone	Supply Traffic Combat Zone	Narrow Roadway (less than 24 ft or 7.2 Meters)	Rolling Terrain	Hills With Curves	Mountainous	Seasonal Bad Weather
Concrete	60,000	36,000	8,400	25	10	30	60	20
Bituminous	45,000	27,000	7,300	25 ¹	10	30 ²	60	30 ³
Bituminous Treated	30,000	18,000	5,800	25	20	40	65	40
Gravel	10,150	6,090	3,400	25	20	50	70	60
Dirt	4,900	2,940	1,600	25	25	60	80	90

FOOTNOTES:

- ¹27,000 — 25% = 20,250 STON
- ²20,250 — 30% = 14,175 STON
- ³14,175 — 30% = 9,922 STONs per day highway tonnage capability

CONSIDERATIONS:

• In using the table of reductions, when more than one limiting factor is involved, apply the narrow roadway factor first; then, to the resulting capability, apply one of the next three factors of terrain. Lastly, apply the weather factor only if the weather conditions are for a sustained period. Note the following example:

Road surface	Bituminous	=	27,000 STON
Location	COMMZ		
Reductions:	Narrow Road		
	Hills with Curves		
	Seasonal Bad Weather		30%

number of units or vehicles required for work loads expressed in gallons, persons, or other units of measure can be determined by substituting that unit of measure for tons in the formulas. The following formulas are applied in computing unit or vehicle requirements.

a. To determine the number of truck companies or vehicles required to move a given number of tons in a one-time lift, substitute appropriate figures in the following formula:

$$\text{Companies required} = \frac{\text{Tons to be lifted}}{\text{Tons per vehicle} \times \text{vehicles available per company}}$$

3-12. US ARMY AIRCRAFT.

a. Both fixed-wing and rotary-wing aircraft are employed to rapidly displace cargo, personnel, and equipment. Generally, fixed-wing aircraft are used for long distance moves due to their greater speed and

$$\text{Vehicles required} = \frac{\text{Tons to be lifted}}{\text{Tons per vehicle}}$$

b. To determine turnaround time, use the following formula. (Caution must be exercised to make sure that the delay factor is accurate. Turnaround time should be rounded off to the nearest tenth for use in computations.)

$$\text{Turnaround time} = \frac{2 \times \text{distance} + \text{Delay time}}{\text{Rate of march (mih)}}$$

c. When locating truck terminals or trailer transfer points, the following formula is used to determine the appropriate distance between installations to obtain a specific turnaround time:

$$\text{Distance} = \frac{\text{hours per operating shift} \times \text{rate (mi/h)}}{2}$$

d. The following formula is used to determine the number of truck companies required to move a given daily tonnage in sustained operations. (This formula is applicable to both local and line-haul operations. The number of vehicles required can be determined by omitting vehicles available per company from the formula.)

$$\text{Companies required} = \frac{\text{Daily tonnage} \times \text{turnaround time}}{\text{Tons per vehicle} \times \text{vehicles available per company} \times \text{operational day}}$$

SECTION III. AIR TRANSPORT PLANNING

range. Rotary-wing aircraft, with their ability to land and take off with little or no ground run, are able to operate from unimproved areas but are not generally suited for extended range missions. Their ability to fly at low airspeeds permits them to operate in weather conditions that are not suitable for fixed-wing aircraft.

The selection of air as a mode of transport must be balanced against the availability of other transport. If the mission can be performed as quickly by other combat forces or mode of transport, air movements should not be used. For data pertaining to cargo lift capability of US Army aircraft, see Table 3-8.

Table 3-8. US Army Aircraft Characteristics

(Fixed Wing)												
A. AIRCRAFT	UNIT	C-12A	C-12C	C-12D	OV-1B	OV-1C	OV-1D	RC-12D	RV-1D	T-42A	U-8F	
B. NORMAL CREW	PER AIRCRAFT	2	2	2	2 (Pilot & Radar Operator)	2 (Pilot & Ir (Operator)	2 (Pilot & Operator)	2	2 (Pilot & Operator)	2 for IFR	1 (2 for IFR)	
C. OPERATIONAL CHARACTERISTICS ^{2,3,4}												
(1) MAX ALLOWABLE GROSS WEIGHT												
	LBS	12,500	12,500	12,500	15,795	14,823	18,109	14,200	18,109	5,100	7,700	
(2) BASIC WEIGHT	LBS	7,869	8,084	8,084	10,983	10,011	12,054	8,143	12,054	3,480	5,490	
(3) USEFUL LOAD	LBS	2,131	4,416	4,416	4,812	4,812	6,055	2,078	6,055	1,620	2,210	
(4) PAYLOAD/NORMAL MISSION	LBS	2,000	2,000	2,000	NA	NA	NA	2,000	NA	1,115	590	
(5) FUEL CAPACITY ^a	LBS/GAL (INTERNAL EXTERNAL)	2,470/386	2,470/386	2,470/386	1,930/297 1,950/300	1,930/297 1,950/300	1,790/276 1,950/300	2,470/386	1,790/276 1,950/300	852/142	1,380/230	

(6) FUEL CONSUMPTION RATE ^a	LBS/GAL PER HOUR	350/538	456/70	456/70	826/126.9	826/126.9	900/130	456/70	900/130	154.8/25.8	204.5/35
(7) NORMAL CRUISE SPEED	KNOTS	240	260	260	225	225	220	260	220	177	160
(8) ENDURANCE AT CRUISE (PLUS 30 MIN RESERVE)	HOURS + MINUTES	6+30	5+15	5+15	1+55 ¹⁴ 3+55 ¹⁵	1+55 ¹⁴ 3+55 ¹⁵	1+40 ¹⁴ 3+30 ¹⁵	5+15	1+40 ¹⁴ 3+30 ¹⁵	5+00	5+30
(9) GRADE OF FUEL	OCTANE	JP-4/5	JP-4/5	JP-4/5	JP-4	JP-4	JP-4	JP-4/5	JP-4	115/145	115/145
D. PASSENGER CAPACITY											
(1) TROOP SEATS	EACH	8	8	8	1	1	1	8	1	3	5
(2) NORMAL CAPACITY	EACH	8	8	8	1	1	1	8	1	3	5
(3) TOTAL CAPACITY W/CREW	EACH	10	10	10	2	2	2	10	2	4	6
(4) LITTERS & AMBULATORY	EACH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. EXTERNAL CARGO											
(1) MAXIMUM RECOMMENDED EXTERNAL LOAD ⁵	LBS	NA	NA	NA	EACH WING 2000	EACH WING 2000	EACH WING 2000	NA	EACH WING 2000	NA	NA
F. DIMENSIONS											
(1) LENGTH — FUSELAGE ⁶	FT-IN	43'-10"	43'-10"	43'-10"	41'-9"	41'-9"	41'-9"	43'-10"	41'-9"	27'-3"	33'-4"
(5) WIDTH — TREAD	FT-IN	17'-2"	17'-2"	17'-2"	9'-2"	9'-2"	9'-2"	17'-2"	9'-2"	9'-7"	12'-9"
(6) HEIGHT — EXTREME	FT-IN	15'-5"	15'-5"	14'-9"	13'-0"	13'-0"	13'-0"	15'-5"	13'-0"	9'-7"	14'-2"
(9) WING SPAN	FT-IN	54'-6"	54'-6"	55'-6.5"	48'-0"	42'-0"	48'-0"	54'-6"	48'-0"	37'-10"	45'-11"
G. CARGO DOOR											
(1) DIMENSIONS — WIDTH/HEIGHT	IN	27.7" x 51.5"	27.7" x 51.5"	52" x 52"	NA	NA	NA	27.7" x 51.5"	NA	13.5" x 22.5"	50.5" x 26.5"
(2) LOCATION — SIDE OF FUSELAGE	(LEFT/RIGHT FRONT/REAR)	LEFT REAR	LEFT REAR	LEFT REAR	NA	NA	NA	LEFT REAR	NA	NA	LEFT
H. CARGO COMPARTMENT											
(1) FLOOR — ABOVE GROUND	IN	47"	47"	42"	NA	NA	NA	47"	NA	NA	48"
(2) USABLE LENGTH	IN	128"	128"	128"	NA	NA	NA	128"	NA	NA	110.5"
(3) FLOOR WIDTH	IN	54"	54"	54"	NA	NA	NA	54"	NA	NA	5"
(4) HEIGHT (CLEAR OF OBSTRUCTIONS)	IN	57"	57"	57"	NA	NA	NA	57"	NA	NA	55"
(5) MAXIMUM CARGO SPACE	CU FT	306.5	306.5	306.5	NA	NA	NA	306.5	NA	NA	158

Table 3-8. US Army Characteristics — (Cont'd)

(Fixed Wing)

A. AIRCRAFT ¹	UNIT										
		U-21A	U-21A	U-21F	U-21G	U-21H	RU-21A	RU-21B	RU-21C	RU-21D	RU-21H
B. NORMAL CREW	PER AIRCRAFT	2	2	2	2	2	4 (2 Pilots & 2 Operators)	4 (2 Pilots & 2 Operators)	4 (2 Pilots & 2 Operators)	4 (2 Pilots & 2 Operators)	4 (2 Pilots & 2 Operators)
C. OPERATIONAL CHARACTERISTICS ^{2, 3, 4}											
(1) MAX ALLOWABLE GROSS WEIGHT	LBS	9,500	9,500	11,568	9,650	9,650	10,200	10,900	10,900	9,650	10,200
(2) BASIC WEIGHT	LBS	5,383	5,383	7,012	5,434	5,434	5,450	5,945	5,945	7,170	6,814
(3) USEFUL LOAD	LBS	4,117	4,117	2,756	4,216	4,216	4,750	4,945	4,945	2,480	3,386
(4) PAYLOAD/NORMAL MISSION	LBS	2,000	2,000	1,800	2,000	2,000	1,845	1,845	1,845	0	962
(5) FUEL CAPACITY ⁹	LBS/GAL (INTERNAL EXTERNAL)	2,457/378	2,457/378	2,405/370	2,457/378	2,457/378	2,405/370	2,574/396	2,574/396	2,405/370	2,405/370
(6) FUEL CONSUMPTION RATE ⁹	LBS/GAL PER HOUR	450/72	450/72	450/72	450/72	450/72	580/89.2	580/89.2	580/89.2	580/89.2	580/89.2
(7) NORMAL CRUISE SPEED	KNOTS	210	210	220	210	210	205	205	205	205	205
(8) ENDURANCE AT CRUISE (PLUS 30 MIN RESERVE)	HOURS + MINUTES	5+00	5+00	4+45	5+00	5+00	3+45	5+00	4+15	3+45	3+45
(9) GRADE OF FUEL	OCTANE	JP-4	JP-4	JP-4	JP-4	JP-4	JP-4/5	JP-4/5	JP-4/5	JP-4/5	JP-4/5
D. PASSENGER CAPACITY											
(1) TROOP SEATS	EACH	10	10	10	10	10	NA	NA	NA	NA	NA
(2) NORMAL CAPACITY	EACH	6	6	7	6	6	NA	NA	NA	NA	NA
(3) TOTAL CAPACITY W/CREW	EACH	12	12	12	12	12	4	5	4	4	4
(4) LITTERS & AMBULATORY	EACH	3/3	3/3	3/3	3/3	3/3	NA	NA	NA	NA	NA
E. EXTERNAL CARGO											
(1) MAXIMUM RECOMMENDED EXTERNAL LOAD ⁵	LBS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F. DIMENSIONS											
(1) LENGTH — FUSELAGE ⁶	FT-IN	35'-10"	35'-10"	39'-11"	35'-10"	35'-10"	35'-10"	35'-10"	35'-10"	35'-10"	35'-10"
(5) WIDTH — TREAD	FT-IN	12'-9"	12'-9"	13'-0"	12'-9"	12'-9"	12'-9"	12'-9"	12'-9"	12'-9"	12'-9"
(6) HEIGHT — EXTREME	FT-IN	14'-2"	14'-2"	15'-4"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"
(9) WING SPAN	FT-IN	45'-11"	45'-11"	45'-11"	45'-11"	50'-11"	50'-11"	45'-11"	45'-11"	45'-11"	50'-11"

G. CARGO DOOR									
(1) DIMENSIONS — WIDTH/HEIGHT	IN	50.5" x 53"	50.5" x 53"	17" x 51.7"	50.5" x 53"	50.5" x 53"	50.5" x 53"	33" x 51.5"	50.5" x 53"
(2) LOCATION — SIDE OF FUSELAGE	(LEFT/RIGHT FRONT/REAR)	LEFT	LEFT	LEFT	LEFT	LEFT	LEFT	LEFT	LEFT
H. CARGO COMPARTMENT									
(1) FLOOR — ABOVE GROUND	IN	48"	48"	45"	48"	48"	48"	48"	48"
(2) USABLE LENGTH	IN	110.5"	110.5"	132"	110.5"	110.5"	110.5"	110.5"	110.5"
(3) FLOOR WIDTH	IN	55"	55"	54"	55"	55"	55"	55"	55"
(4) HEIGHT (CLEAR OF OBSTRUCTIONS)	IN	55"	55"	57"	55"	55"	55"	55"	55"
(5) MAXIMUM CARGO SPACE	CU FT	230	230	306	230	158	158	158	158

(Rotary Wing)

A. AIRCRAFT¹									
B. NORMAL CREW	UNIT								
C. OPERATIONAL CHARACTERISTICS^{2, 3, 4}	PER AIRCRAFT	1 + Observer	1 + Observer	1 + Observer	4	4	4	4	4
(1) MAX ALLOWABLE GROSS WEIGHT	LBS	2,400	3,000	3,200	33,000	40,000	46,000	50,000	42,000
(2) BASIC WEIGHT	LBS	1,163	1,586	1,898	18,153	19,591	20,481	22,499	20,800
(3) USEFUL LOAD	LBS	1,237	1,417	1,302	14,888	20,455	23,380	27,501	21,200
(4) PAYLOAD/NORMAL MISSION	LBS	650 ^e	760 ^e	837 ^e	10,000	15,000	18,200	20,206	11,650 ^e
(5) FUEL CAPACITY ⁹	LBS/GAL (INTERNAL)	400/61.5	475/73	465/71.5	4,036/621	4,036/621	7,351/1131	6,695/1030	8,794/1,353
(6) FUEL CONSUMPTION RATE ⁹	LBS/GAL PER HOUR	143/22	189/29	175/27	2,120/342	2,780/427	3,038/467	2,600/400	3,624/556
(7) NORMAL CRUISE SPEED	KNOTS	121	120	120	120	150	155	155	95
(8) ENDURANCE AT CRUISE (PLUS 30 MIN RESERVE)	HOURS + MINUTES	3 + 15	3 + 30	3 + 00	1 + 30	1 + 00	2 + 00	2 + 30	2 + 00
(9) GRADE OF FUEL	OCTANE	JP-4	JP-4	JP-4	JP-4	JP-4	JP-4	JP-4	JP-4/5
D. PASSENGER CAPACITY									
(1) TROOP SEATS	EACH	3	4	4	33	33	33	33	1
(2) NORMAL CAPACITY	EACH	3	4	4	33	33	33	33	1
(3) TOTAL CAPACITY W/CREW	EACH	4	4	4	37	37	37	37	5
(4) LITTERS & AMBULATORY	EACH	NA	2/4	2	24	24	24	24	0
E. EXTERNAL CARGO									
(1) MAXIMUM RECOMMENDED EXTERNAL LOAD ⁵	LBS	NA	NA	NA	16,000	20,000	20,000	20,000	20,000
(2) RESCUE HOIST CAPACITY	LBS	NA	NA	NA	600	600	600	600	NA
(3) CARGO WINCH CAPACITY	LBS	NA	NA	NA	3,000	3,000	3,000	3,000	15,000

Table 3-8. US Army Aircraft Characteristics — (Cont'd)

(Rotary Wing)

AIRCRAFT ¹	UNIT	OH-5A	OH-58A	OH-58C	CH-47A	CH-47B	CH-47C	CH-47D	CH-54A
F. DIMENSIONS									
(1) LENGTH — FUSELAGE ⁶	FT-IN	23'-0"	32'-3.5"	32'-8.8"	51'-0"	51'-0"	51'-0"	51'-0"	70'-0"
(2) LENGTH — BLADES UNFOLDED	FT-IN	30'-4"	40'-11.8"	40'-11.8"	98'-3"	99'-0"	99'-0"	99'-0"	88'-5"
(3) LENGTH — BLADES FOLDED	FT-IN	23'-0"	NA	NA	51'-0"	51'-0"	51'-0"	51'-0"	NA
(4) WIDTH — BLADES FOLDED	FT-IN	5'-6"	NA	NA	12'-5"	12'-5"	12'-5"	12'-5"	NA
(5) WIDTH — TREAD	FT-IN	6'-9"	6'-3.5"	6'-5.4"	11'-11"	11'-11"	11'-11"	11'-11"	19'-9"
(6) HEIGHT — EXTREME	FT-IN	8'-3"	9'-6.5"	12'-0"	18'-6"	18'-8"	18'-8"	18'-8"	24'-5"
(7) DIAMETER — MAIN OR FORWARD ROTOR	FT-IN	26'-4"	35'-4"	35'-4"	59'-1"	60'-0"	60'-0"	60'-0"	72'-0"
(8) DIAMETER — TAIL OR REAR ROTOR	FT-IN	4'-3"	5'-2"	5'-2"	59'-1"	60'-0"	60'-0"	60'-0"	16'-0"
(9) WING SPAN	FT-IN	NA	NA	NA	NA	NA	NA	NA	NA
G. CARGO DOOR									
(1) DIMENSIONS — WIDTH/HEIGHT	IN	41" x 34.5"	40" x 35"	40" x 35"	90" x 78"	90" x 78"	90" x 78"	90" x 78"	104.5" (POD)
(2) LOCATION — SIDE OF FUSELAGE	(LEFT & RIGHT FRONT REAR)	LEFT & RIGHT	LEFT & RIGHT	REAR RIGHT	REAR	REAR	REAR	REAR	REAR
H. CARGO COMPARTMENT									
(1) FLOOR — ABOVE GROUND	IN	14.5"	22.5"	22.5"	30"	31.2"	31.2"	31.2"	27" (POD)
(2) USABLE LENGTH	IN	5'-9"	39"	39"	360"	360"	30'-2"	30'-2"	329"
(3) FLOOR WIDTH	IN	3'-2"	50"	50"	90"	90"	7'-6"	7'-6"	104.5"
(4) HEIGHT (CLEAR OF OBSTRUCTIONS)	IN	3'-2"	50"	50"	78"	78"	6'-6"	6'-6"	78"
(5) MAXIMUM CARGO SPACE	CU FT	40	20	20	1,474	1,474	1,474	1,474	1,552
I. WEAPONS ¹⁰	NA	XM-27E-1	XM-27E-1	NA	M-24 XM-41	M-24 XM-41	M-24 XM-41	M-24 XM-41	NA
(Rotary Wing)									
A. AIRCRAFT ¹	UNIT	CH-54B	UH-1C/M	UH-1H/V	UH-60	TH/AH-1G	AH-1S	AH-64 ^{13,22}	
B. NORMAL CREW	PER AIRCRAFT	4	2	2	3	2	2	2	
C. OPERATIONAL CHARACTERISTICS ^{2,3,4}									
(1) MAX ALLOWABLE GROSS WEIGHT	LBS	47,000	9,500	9,500	20,250	9,500	10,000	17,400	
(2) BASIC WEIGHT	LBS	21,200	4,827	5,132	10,500	5,560	6,598	10,505	
(3) USEFUL LOAD	LBS	25,800	4,673	4,368	6,195	3,940	4,302	6,895	
(4) PAYLOAD/NORMAL MISSION	LBS	16,258	2,685	2,900	3,360 ¹⁶	1,785 ²⁰	1,293 ²⁰	4,090 ²⁰	
(5) FUEL CAPACITY ⁹	LBS/GAL (INTERNAL EXTERNAL)	8,794/1,353	15,573/242	1,358/209	2,360/362	1,755/270	1,703/262	2,405/370	
(6) FUEL CONSUMPTION RATE ⁹	LBS/GAL PER HOUR	4,230/65 ¹	500/77	550/84	960/148	546/83.6	640/98	810/124	

(7) NORMAL CRUISE SPEED	KNOTS	110	92-140	90-120	145	0-190 ¹⁸	0-190 ¹⁸	0-161 ¹⁸
(8) ENDURANCE AT CRUISE (PLUS 30 MIN RESERVE)	HOURS + MINUTES	1+30	3+00- 2+45	2+15	2+15	2+007	2+30	1+45
(9) GRADE OF FUEL OCTANE		JP-4/5	JP-4/5	JP-4/5	JP-4/5/8	JP-4	JP-4	JP-4/5/8
D. PASSENGER CAPACITY								
(1) TROOP SEATS	EACH	1	7	11	14	0	0	0
(2) NORMAL CAPACITY	EACH	1	7	11	14	0	0	0
(3) TOTAL CAPACITY W/CREW	EACH	5	9	13	17	0	0	0
(4) LITTERS & AMBULATORY	EACH	0	3	6	4/6	0	0	0
E. EXTERNAL CARGO								
(1) MAXIMUM RECOMMENDED EXTERNAL LOAD ⁵	LBS	25,000	3,787	4,000	8,000	NA	1,380 ¹⁸	6,200 ¹⁸
(2) RESCUE HOIST CAPACITY	LBS	NA	300 ¹⁷	300 ¹⁷	600	NA	NA	NA
(3) CARGO WINCH CAPACITY	LBS	25,000	NA	NA	NA	NA	NA	NA
F. DIMENSIONS								
(1) LENGTH — FUSELAGE ⁶	FT-IN	70'-0"	42'-7"	40'-7"	50'-7.5"	44'-5.2"	44'-7"	49'-3"
(2) LENGTH — BLADES UNFOLDED	FT-IN	88'-5"	52'-10"	57'-1"	64'-10"	52'-11.7"	53'-1"	57'-1"
(3) LENGTH — BLADES FOLDED	FT-IN	NA	NA	NA	40'-4"	NA	NA	NA
(4) WIDTH — BLADES FOLDED	FT-IN	NA	NA	8'-7"	9'-8.1"	10'-4"	10'-9"	16'-3"
(5) WIDTH — TREAD	FT-IN	19'-9"	8'-4"	8'-7"	8'-10.2"	7'-0"	7'-0"	6'-6"
(6) HEIGHT — EXTREME	FT-IN	24'-5"	12'-8"	14'-6"	17'-6"	11'-7"	13'-9"	12'-6"
(7) DIAMETER — MAIN OR FORWARD ROTOR	FT-IN	72'-0"	44'-0"	48'	53'-8"	44'-0"	44'-0"	49'-0"
(8) DIAMETER — TAIL OR REAR ROTOR	FT-IN	16'-0"	8'-6"	8'-6"	11'-0"	8'-6"	8'-6"	9'-3"
(9) WING SPAN	FT-IN	NA	NA	NA	NA	10'-4"	10'-4"	16'-3"
G. CARGO DOOR								
(1) DIMENSIONS — WIDTH/HEIGHT	IN	104.5" (POD)	48" x 48"	74" x 48"	68" x 54"	NA	NA	NA
(2) LOCATION — SIDE OF FUSELAGE (LEFT/RIGHT FRONT/REAR)		REAR	LEFT & RIGHT	LEFT & RIGHT	LEFT & RIGHT	NA	NA	NA
H. CARGO COMPARTMENT								
(1) FLOOR — ABOVE GROUND	IN	27" (POD)	14"	24"	19"	NA	NA	NA
(2) USABLE LENGTH	IN	329"	60"	92"	110"	NA	NA	NA
(3) FLOOR WIDTH	IN	104.52"	80.5"	96"	72"	NA	NA	NA
(4) HEIGHT (CLEAR OF OBSTRUCTIONS)	IN	78"	54"	49"	54"	NA	NA	NA
(5) MAXIMUM CARGO SPACE	CU FT	1,552	140	220	246.8	NA	NA	NA
I. WEAPONS ¹⁰								
		NA	XM-3	M-23	M-23	M-18	NA	XM-430
			M-5	M-56		M-28	M-65	HELLFIRE
			M-6	M-5923		M-35	M-158	M-200 ¹²
			XM-16			M-1,571 ¹¹	M-200 ¹²	M-260
			XM-21			M-158A1 ¹¹		
			M-22			1	M-260	M-261
			XM-156			M-159 ¹²	M-261	M-230
						M-200 ¹²		

Table 3-8. US Army Aircraft Characteristics — (Cont'd)**FOOTNOTES:**

¹A — Attack, C — Cargo, O — Observation, U — Utility.

²All data computed at standard conditions at sea level.

³Detailed weight computations and characteristics taken from current 55-series TMs.

⁴Data subject to change due to developmental testing.

⁵Maximum load the aircraft is capable of lifting.

⁶Dimension from nose to end of tail.

⁷Varies with load carried. Figure given is for normal mission profile.

⁸Does not meet 200-NM range requirement of normal mission definition.

⁹Aviation gas figured on 6 lbs/gal. JP-4 computed on 6.5 lbs/gal.

¹⁰Indicates type of weapons aircraft can carry. Specific armament based on unit assignment.

¹¹Seven-round 2.75-inch rocket pod.

¹²Nineteen-round 2.75-inch rocket pod.

¹³Subject to final development configuration.

¹⁴Without external fuel.

¹⁵With external fuel.

¹⁶Normal mission, internal load, probability exists to cube out before weight out. Max load on the floor is 300 lbs/sq ft.

¹⁷UH-1 is restricted to hoist capacity of 300 lbs because of center of gravity conditions.

¹⁸External wing stores.

¹⁹Due to armament configurations and flight profiles.

²⁰Considers gross weight minus basic weight minus 400 lbs for crew and total fuel weight.

²¹Fuel consumption at 92 kts, 77 gal/hr; at 140 kts, 84 gal/hr.

²²Weapons are not applicable to UH-1V, medical evacuation helicopters.

CONSIDERATIONS:

- This chart is for general reference use only. Refer to the appropriate operator's manual for detailed information.
- Definitions of terms used in this table include the following:
 - Maximum allowable gross weight. The maximum allowed total weight of the aircraft prior to takeoff. The "basic weight" of the aircraft plus the crew, personnel equipment, special device, passengers and cargo, and usable fuel and oil. This is limited by structure, power available, or landing load.
 - Basic weight. The empty weight of an aircraft configuration to include all appointments, integral equipment, instrumentation, and trapped fuel and oil, but excluding passengers, cargo, crew, fuel, and oil.
 - Useful load. The load-carrying capability of an aircraft including payload, crew, oil, and usable fuel required for the mission. This is the difference between "maximum allowable gross weight" and "basic weight" as defined above. Thus, a reduction of the fuel load will decrease the endurance and increase the payload. Fuel oil is required for all missions.
 - Payload. The useful load less the crew, full oil, and the required fuel for the mission.
 - Normal mission. Payload available computed under the follow conditions:
 - Fuel for 200 NM plus 30-minute reserve.
 - Flight altitude 2000' mean sea level, standard temperature.
 - Takeoff maximum gross weight (weight of crew included).
 - Normal cruising speed. The true airspeed which an aircraft can normally be expected to maintain at some standard power setting below rated military power. This speed will vary with altitude (for example, the U-8F's normal is 165 at 65% power at 8,000 feet).
 - Endurance at cruising speed. The time that an aircraft can remain airborne at normal cruising speed with fuel aboard without using the required fuel reserve. The data listed under "Operational Characteristics" are computed using full fuel minus a 30-minute reserve.

b. Planning factors include —

(1) Availability. Availability is affected by scheduled and unscheduled maintenance, repair parts supply, combat losses, and the geographical location of operating and service units. AR 95-33 provides approximate availability percentages for Army aircraft.

(2) Landing sites. Provisions must be made for adequate landing sites in planning helicopter movements. FM 57-38 provides detailed information regarding helicopter landing zones. As a minimum, the following landing zone dimensions must be allowed per type aircraft:

OH-58, OH-6	80-foot diameter (25 meters)
UH-1	125-foot diameter (38 meters)
U-60	160-foot diameter (49 meters)
CH-47	264-foot diameter (80 meters)
CH-54	264-foot diameter (80 meters)

(3) Load/unload time. The aircraft presumably has been properly prepared for the personnel or cargo it is to transport. The times do not include palletizing general cargo for internal loading or for rigging slings on cargo for external transport. The factors given below are for planning purposes:

<u>Personnel:</u>	
Troops	3 minutes
Patients	10 minutes
<u>Cargo internal in fuselage:</u>	
Single vehicles	10 minutes
Vehicles with trailers	15 minutes
Palletized cargo by hand	25 minutes
<u>Cargo suspended beneath helicopter:</u>	
Hook up time only	30 seconds

3-13. TRANSPORT HELICOPTER REQUIREMENTS.

a. Most helicopter operations will be of the short-haul type (less than 35 nautical miles) and may require that more than one operation mission (sortie) be flown in support of the total movement. To assess capability

to move personnel and supplies by Army fixed-wing aircraft, see FM 55-15.

b. To determine the number of helicopters or units required to accomplish a given mission or the capabilities of helicopters on a specific mission, the staff planner should use the following formulas:

(1) To determine number of trips per day per aircraft:

$$N = \frac{(H \cdot R) \times S}{D}$$

Where: N = number of round trips per day per type aircraft.

H = number of operational hours per day.

R = refueling/service stops (in hours).

S = average sortie speed of aircraft in knots. For planning, use cruising speed unless some other speed is specified.

D = round trip distance in nautical miles. This distance must be the actual distance flown rather than a straight-line course from origin to destination. When estimating distance, consideration should be given to terrain, weather, enemy situation, and aids to navigation.

Example: $N = \frac{(8 \cdot 2) \times 80 \text{ knots}}{35 \text{ nautical miles}}$

$$\frac{480}{35} = 13.7 \text{ or } 13 \text{ round trips per day}$$

(2) To determine number of aircraft required:

$$O = \frac{T}{N \times P}$$

Where: O = number of aircraft required.

T = tonnage to be moved.

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N = number of round trips per day per type aircraft.

P = payload of type aircraft used.

Example: $O = \frac{200 \text{ STON}}{2 \times 10 \text{ STON}}$

$$\frac{200}{20} = 10 \text{ aircraft required to move tonnage (or } 20 \text{ single aircraft lifts)}$$

(3) To determine the capability of a given number of aircraft (or units):

$$T = N \times P \times A$$

Where: T = tonnage that can be moved by available aircraft.

N = number of round trips per day per type aircraft.

P = payload per type aircraft.

A = number of aircraft available.

Example: $T = 2 \times 10 \text{ STON} \times 10 \text{ aircraft}$

$$2 \times 10 \times 10 = 200 \text{ STON per day}$$

c. This method of determining helicopter requirements is particularly applicable to movement of supplies or troops when combat-loading is not a consideration. The planner should use a planning worksheet to determine aircraft requirements for air-landed assault operations and to develop loads that provide for tactical integrity of the combat units and combat-loading of each aircraft. The planner can use the method of determining aircraft requirements described here to estimate requirements for assault operations by adding 10 percent to the unit personnel and equipment tonnage to allow for combat-loading.

3-14. US AIR FORCE AIRCRAFT.

a. Portions of the narrative and tables for this section are unclassified extracts from AFR 76-2. Tables 3-9 through 3-11 provide general aircraft performance data for the C-5A, C-141B, and C-130E/H.

FM 101-10-1

Table 3-9. C-5A Aircraft Performance Data**(Post-Wing Modification)**

1. Description:	
a. General	Lockheed — 4 engines turbojet (TF-30-GE-1)
b. Wing span	222' 08"
c. Length overall	247' 10"
d. Main gear tread	35' 11" (37' 6" (outside dimension))
e. Fuel capacity	318,100 lbs
2. Loading Characteristics — fore and aft ramp, ground or truckbed level and 463L system.	
3. Mission — cargo and troops.	
4. Main Cabin Dimensions:	
a. Length	121' 01"
b. Width	19' 0"
c. Height	13' 06"
d. Floor area (fixed and ramp)	2,747 sq ft
e. Usable cube — main compartment (floor loaded)	18,368 cu ft
5. Door Dimensions—	
Front — width: 19'; height: 13' 6"	
Rear — width: 19'; height: 9' 6"	
(12' 6" with ramp on ground)	
6. Largest Single Item — see AFR 76-2.	
7. Performance:	
a. Maximum ferry range ¹	5,900 nautical miles
b. Takeoff to block-in speed	436 knots
c. Average cruise speed ² (KTAS)	450 knots

d. Emergency or wartime takeoff gross weight	769,000 lbs
e. Peacetime takeoff gross weight	769,000 lbs
f. Normal operating altitude ³	31/41,000
g. Minimum runway requirements ⁴	
Takeoff (wartime/peace-time)	9,450/8,000'
Landing (brakes only)	4,610'
h. Maximum ACL ⁵ (floor loaded) (peacetime)	204,000 lbs
(wartime)	242,000 lbs
i. Maximum number of 463L pallets	36
j. Maximum number of troops maximum capacity	340 (73 in troop compartment and 267 in the cargo compartment.)
Peacetime	73
k. Minimum pavement for 180-degree turn	148'
l. Minimum runway width peacetime/normal) ⁶	148'

FOOTNOTES:

- ¹Fuel reserves computed according to MACR 55-1 (which may be obtained from MAC/DAPE, Scott AFB, IL 62225) include 10 percent enroute time (over water) not to exceed 1 hour of fuel plus fuel to a 30-minute alternate plus holding fuel plus 5,200 lbs approach and landing fuel.
- ²Normal cruising airspeed after climb to operating altitude.
- ³Most efficient operating altitude consistent with mission requirements.
- ⁴Takeoff based on critical field length at normal maximum landing gross plus 250 ft lineup distance.
- ⁵Wartime and emergency airfield requirements are evaluated on an individual basis.
- ⁶Based on 372,500 lbs operating weight.

Table 3-10. C-141B Aircraft Performance Data

l. Description:	
a. General	Lockheed — 4 engines — turbojet
b. Wing span	160'
c. Length overall	168' 4"
d. Main gear tire tread	21' 7" (outside dimension)
e. Usable fuel	153,352 (air refuelable)
2. Loading Characteristics — rear ramp, ground or truck bed level, and 463L system.	
3. Mission — cargo, troops, tactical airdrop.	
4. Main Cabin Dimensions:	
a. Length	1,120"
b. Width	123"
c. Height	109"
d. Usable floor area (fixed and ramp)	937 sq ft
e. Usable cube — main compartment	7,024 cu ft
5. Main Door Dimensions — width: 123"; height: 109"	
6. Largest Single Item — see AFR 76-2.	
7. Performance:	
a. Maximum ferry range ¹	4,531 nautical miles
b. Takeoff to block-in speed	410 knots
c. Average cruise speed ² (KTAS)	425 knots (.74 mach)
d. Emergency/warime takeoff gross weight	343,000 lbs
e. Peacetime takeoff gross weight	323,000 lbs
f. Normal operating altitude ³	FL 310-FL 410

g. Minimum runway requirements ⁴	
Takeoff (wartime/peacetime)	8,420/7,350 ft
Landing (brakes only)	3,840 ft
h. Maximum ACL (floor loaded)	90,200 lbs
i. Maximum number of 463L pallets	13
j. Maximum number of troops	
Maximum wartime capacity ⁵	200 ⁷ (P-5 configuration)
Peacetime ⁶	143 (P-2 configuration)
k. Maximum number of paratroops	155
l. Minimum pavement for 180-degree turn	137 ft
m. Minimum runway width ⁶	98 ft

FOOTNOTES:

- ¹MAC reserve includes 10 percent en route time (over water not to exceed 1-hour fuel) plus fuel to alternate, plus holding, plus 2,500 lbs fuel for approach and landing.
- ²Normal cruising airspeed after climb to operating altitude.
- ³Most efficient operating altitude consistent with mission requirements.
- ⁴Takeoff based on critical field length at wartime/peacetime maximum takeoff gross weight, plus 200 feet for lineup, landing at normal maximum landing gross weight.
- ⁵Based on two aircrew members in the cargo compartment. See MACR 55-4 (which may be obtained from MAC/DAPE, Scott AFB, IL 62225) for detailed aircraft configuration for troop seating capability. The 143 troops are a norm for general planning purposes and may be exceeded for specific plans or situations by coordinating with and obtaining approval of MAC/TROP.
- ⁶Wartime and emergency airfield requirements are evaluated on an individual basis.
- ⁷The maximum overwater with minimum crew is 153.

Table 3-11. C-130E/H Aircraft Performance Data
(C-130H data, where different, are shown in parentheses.)

1. Description:	
a. General	Lockheed — 4 engines — turboprop
b. Wing span	132' 7"
c. Length overall	99' 6"
d. Main gear tread	14' 3"
e. Usable fuel	62,920 lbs
2. Loading Characteristics — rear ramp, ground or truckbed level, and 463L system.	
3. Mission — cargo, troops, tactical airdrop/air-land.	
4. Main Cabin Dimensions:	
a. Length (maximum usable)	470"
b. Width (maximum usable)	114"¹/105"²
c. Height (maximum usable)	108"²
d. Usable floor area (fixed and ramp)	370 sq ft
e. Usable cube — main compartment	2,818 cu ft
5. Door Dimensions	
Width: 123", height: 108"	
Width: 114", height: 105" (for tactical operations)	
6. Largest Single Item — see AFR 76-2.	
7. Performance:	
a. Maximum ferry range	4,004 nautical miles (4,242 nautical miles)
b. Takeoff to block-in speed	260 knots
c. Average cruise speed³ (KTAS)	280 knots (300)¹⁰

d. Emergency/wartime takeoff gross weight	173,700 lbs
e. Peacetime takeoff gross weight	153,700 lbs ^e
f. Normal operating altitude ^d	18,000'/26,000' (23,500'/28,000')
g. Minimum Runway Requirements ^e	
Takeoff	2,600 ft (2,300 ft)
Landing	2,700 ft (2,360 ft)
h. Maximum ACL (floor loaded) ^e	35,000 lbs (35,500 lbs)
i. Maximum number of 463L pallets	6
j. Maximum number of troops	
Maximum wartime capacity	91
Maximum peacetime capacity	74
k. Maximum number of paratroops	64
l. Minimum pavement for 180-degree turning ⁷	74 ft
m. Minimum runway width	60 ft

FOOTNOTES:

- ¹ Dimensions shown are reduced by major command requirements for a safety aisle for crew access to the rear of the airplane along the left side of the cargo compartment.
- ² Vertical clearance is reduced to 105' with 463L roll conveyor system installed (standard).
- ³ Normal cruising airspeed after climb to operating altitude.
- ⁴ Most efficient operating altitude consistent with mission requirements.
- ⁵ Applicable to shortfield operations only.
- ⁶ Based on 1,175 nautical miles.
- ⁷ Figures represent minimum turning capability for a 180-degree turn without utilizing reverse thrust and backing techniques.
- ⁸ Maximum ramp weight less taxi, runup, and takeoff fuel.
- ⁹ Horizontal clearance for vehicles is limited to 105'.
- ¹⁰ Wartime factors. For peacetime operations, 280 KTAS is used for MAC 130-H aircraft for fuel economy.

b. Army planners on higher level staff must be capable of making gross estimates of airlift requirements for long-range and contingency planning. Army planners at division level and below must be capable of estimating aircraft requirements to a finer degree of accuracy. The method described in paragraph 3-14.g. is suggested for making gross estimates, and type load planning is recommended for estimates and plans produced at division level and below. The planner should be aware that the ACL of an aircraft will vary because of the volume, size, type cargo, distance to be flown, and runway limitations at origin, en route, or destination. Average payloads for different types of divisions are shown in Tables 3-12 through 3-17. Armored and mechanized divisions are considered heavy units, and infantry, airborne, and air assault divisions are considered average units when computing payload planning factors.

c. The variance of loads is caused by the density of the equipment. An M-60 tank weighing 53 tons, for example, will take approximately the same space in a C-5A as one UH-60 helicopter weighing 5 tons.

d. Large-unit moves by air may involve departure from several airfields. The availability of transport aircraft, air installations, and base facilities; the

urgency of the situation; and the enemy capabilities are major factors in determining the number of installations employed and number of sorties to be flown. FMs 100-5 and 101-5 provide general considerations and procedures governing use of air transportation. FM 55-12, FM 55-13, AFR 76-2, and TM 55-450-10/2 contain specific data regarding load planning, determination of aircraft requirement, and forms applicable to air movement.

e. The columns headed "Maximum Allowable Cargo Load" in Tables 3-12 through 3-17 show the ACLs that can be carried regardless of cargo density or method of computation. These ACLs are based on an operating weight of 372,500 pounds for the C-5A; 149,000 pounds for the C-141B; and 80,000 pounds for the C-130. If planning 463L pallet loads, subtract 354 pounds for each pallet used from the appropriate line in the ACL column. ACL figures are primarily for information and should not be used in planning except in unusual cases when cargo density is known to be high and physical characteristics of the cargo would permit full utilization of available cabin space.

f. General load planning factors for the C-5A, C-141B, and C-130E for bulk or floor loads are shown in Tables 3-12 through 3-17. In using payload planning factors, consider the following:

(1) Troop accommodations, such as seats, are installed for carrying 73 troops on the upper deck of the C-5 aircraft. When troops are carried on the upper deck, the ACL for cargo may have to be adjusted. The total weight of the cargo, troops, and their baggage cannot exceed the ACL figure for the longest leg of a trip. Provisions for emergency ground egress from the lower deck are limited. Therefore, according to the USAF C-5A mission statement, the C-5A normally will not be planned for a pure troop role. Under unusual circumstances, up to 270 troops may be carried in the main cargo compartment; this is subject to approval of the Commander, MAC, and the Chief of Staff, USAF. (This is in addition to the 73 troops that can normally be carried on the upper deck.) In Tables 3-12 and 3-13, fewer than 73 passengers are shown, in most instances, to maximize cargo capacity within the ACL.

(2) The weight of accompanying troops must be added to the average palletized or floor-loaded payloads to ensure that the total payload does not exceed the ACL for the critical leg considered. Tables 3-10 and 3-11 show maximum passenger capacity when missions are planned for a purely troop-airlift role. Tables 3-14 through 3-17 show planned accompanying passengers for various planning factors with the C-141B and C-130E.

Table 3-12. C-5 (Post-Wing Modification) Peacetime Payload Planning Factors in Tons^{1,2}

(Average, Heavy, and Light Units)

LONGEST LEG OF DEPLOYMENT	MAXIMUM	CROSS- OVER DENSITY ⁵	PLANNED	PLANNED	PLANNED	PLANNED	PLANNED	PLANNED	PLANNED	PLANNED
	ALLOWABLE CARGO LOAD ^{3,4}		OUTSIZE PAYLOAD ⁶	TOTAL PAYLOAD	ACCOMPANYING PASSENGERS ⁶	OVERSIZE PAYLOAD ⁶	TOTAL PAYLOAD	ACCOMPANYING PASSENGERS	BULK PAYLOAD ⁷	ACCOMPANYING PASSENGERS
	AVERAGE UNITS									
1500 NM or Air Refueled	98.7	10.7	68.5	88.1	28	73.5	74.9	43	82.8	63
2500 NM	98.7	10.7	68.5	88.1	28	73.5	74.9	43	82.8	63
3500 NM	76.2	8.3	60.7	70.6	24	65.2	66.0	27	69.0	12
4500 NM	54.7	6.0	50.1	50.8	18	51.6	52.0	12	50.6	1
HEAVY UNITS										
1500 NM or Air Refueled	98.7	10.7	69.3	94.5	9	81.1	82.0	32	82.8	63
2500 NM	98.7	10.7	69.3	94.5	9	81.1	82.0	32	82.8	63
3500 NM	76.2	8.3	61.6	74.6	7	69.4	69.8	16	69.0	12
4500 NM	54.7	6.0	52.4	53.7	4	53.0	53.3	6	50.6	1
LIGHT UNITS										
1500 NM or Air Refueled	98.7	10.7	14.4	37.2	73	52.4	59.6	62	82.8	63
2500 NM	98.7	10.7	14.4	37.2	73	52.3	59.5	62	82.8	63
3500 NM	76.2	8.3	14.4	37.2	72	50.5	56.8	46	69.0	12
4500 NM	54.7	6.0	14.4	36.3	59	44.8	48.3	24	50.6	1

FOOTNOTES:

¹Includes operation at 2.25G maneuver load factor.

²Fuel requirements computed according to MACR 55-2 and AFR 60-16, MACSUP 1. Payloads are based on a maximum takeoff weight of 769,000 lbs, an operating weight of 372,500 lbs, and a step climb profile at 300 KSAS/1.77 Mach.

³The maximum ACL is computed without regard to cargo density. It is limited only by aircraft structural limitations and is shown primarily for information. It includes the weight of any passengers carried. It should not be used unless cargo density is known to be high and unless physical characteristics of the cargo would permit full utilization of the cargo compartment space. When planning a palletized load, the weight of the pallets and nets (354 lbs/pallet) must be subtracted to determine the net transportable load.

⁴Maximum ACL was calculated using 30 minutes to alternate, 45 minutes for holding, and 10 percent reserve fuel over the entire leg.

⁵Crossover density is the point at which the cube constrained payload equals the weight constrained payload when the entire usable volume of the cargo compartment (18,368 cubic feet) is used.

⁶Outsize and oversize payloads have been derived from the airlift loading model.

⁷Average palletized payloads shown are exclusive of the weight of the pallet and are based on a 463L system configuration of six pallets loaded to an average of 2.3 tons per pallet.

Table 3-13. C-5 (Post-Wing Modification) Wartime Payload Planning Factors in Tons^{1,2}

(Average, Heavy, and Light Units)

LONGEST LEG OF DEPLOYMENT	MAXIMUM											
	ALLOWABLE CARGO LOAD ^{3,4}	CROSS- OVER DENSITY ⁵	PLANNED OUTSIZE PAYLOAD ⁶	PLANNED TOTAL PAYLOAD	PLANNED ACCOMPANYING PASSENGERS ⁶	PLANNED OVERSIZE PAYLOAD ⁶	PLANNED TOTAL PAYLOAD	PLANNED ACCOMPANYING PASSENGERS	PLANNED BULK PAYLOAD ⁷	PLANNED ACCOMPANYING PASSENGERS		
	AVERAGE UNITS											
1500 NM or Air Refueled	121.2	13.2	100.7	105.4	27	78.5	80.2	53	82.8	73		
2500 NM	100.6	11.0	68.7	89.6	28	74.1	75.3	44	82.8	73		
3500 NM	76.2	8.3	60.7	70.6	24	65.2	66.0	27	69.0	12		
4500 NM	54.7	6.0	50.1	50.8	18	51.6	52.0	12	50.6	1		
HEAVY UNITS												
1500 NM or Air Refueled	121.2	13.2	111.4	116.2	8	88.8	89.9	41	82.8	73		
2500 NM	100.6	11.0	69.5	96.2	9	81.8	82.5	33	82.8	73		
3500 NM	76.2	8.3	61.6	74.6	7	69.4	69.8	16	69.0	12		
4500 NM	54.7	6.0	52.4	53.7	4	53.0	53.3	6	50.6	1		
LIGHT UNITS												
1500 NM or Air Refueled	121.2	13.2	14.4	37.2	73	53.2	60.6	69	82.8	73		
2500 NM	100.6	11.0	14.4	37.2	73	52.5	59.7	63	82.8	73		
3500 NM	76.2	8.3	14.4	37.2	72	50.5	56.8	46	69.0	12		
4500 NM	54.7	6.0	14.4	36.3	59	44.8	48.3	24	50.6	1		

FOOTNOTES:¹Includes operation at 2,25G maneuver load factor.²Fuel requirements computed according to MACR 55-2 and AFR 60-16, MACSUP 1. Payloads are based on a maximum takeoff weight of 769,000 lbs, an operating weight of 372,500 lbs, and a step climb profile at 300 KSAS/.79 Mach.³The maximum ACL is computed without regard to cargo density. It is limited only by aircraft structural limitations and is shown primarily for information. It includes the weight of any passengers carried. It should not be used unless cargo density is known to be high and physical characteristics of the cargo would permit full utilization of the cargo compartment space. When planning a palletized load, the weight of the pallets and nets (354 lbs/pallet) must be subtracted to determine the net transportable load.⁴Maximum ACL was calculated using 30 minutes to alternate, 45 minutes for holding, and 10 percent reserve fuel over the entire leg.⁵Crossover density is the point at which the cube constrained payload equals the weight constrained payload when the entire usable volume of the cargo compartment (118,368 cubic feet) is used.⁶Outsize and oversize payloads have been derived from the airlift loading model.⁷Average palletized payloads shown are exclusive of the weight of the pallet and are based on a 463L system configuration of 36 pallets loaded to an average of 2.3 tons per pallet.

Table 3-14. C-141B Peacetime Payload Planning Factors in Tons^{1,2}

(Average, Heavy, and Light Units)

LONGEST LEG OF DEPLOYMENT	MAXIMUM ALLOWABLE CARGO LOAD ^{3,4}	CROSSOVER DENSITY ⁵	PLANNED OVERSIZE PAYLOAD ⁶	PLANNED TOTAL PAYLOAD	PLANNED ACCOMPANYING PASSENGERS	PLANNED BULK PAYLOAD ⁷
AVERAGE UNITS						
1500 NM or Air Refueled	34.8	9.9	24.0	24.0	27	29.9
2500 NM	30.2	8.6	22.4	22.4	22	27.6
3500 NM	20.3	5.8	17.5	17.5	14	18.4
4500 NM	3.5	1.0	3.1	3.1	2	2.3
HEAVY UNITS						
1500 NM or Air Refueled	34.8	9.9	27.1	27.3	21	29.9
2500 NM	30.2	8.6	24.8	24.8	15	27.6
3500 NM	20.3	5.8	18.3	18.3	10	18.4
4500 NM	3.5	1.0	3.1	3.1	3	2.3
LIGHT UNITS						
1500 NM or Air Refueled	34.8	9.9	16.8	17.0	32	29.9
2500 NM	30.2	8.6	16.6	16.8	31	27.6
3500 NM	20.3	5.8	15.2	15.3	20	18.4
4500 NM	3.5	1.0	3.3	3.3	1	2.3

FOOTNOTES:

¹Operations limited to 2.25G maneuver load factor.

²Fuel requirements computed according to MACR 55-141 and AFR 60-16, MACSUP 1. Payloads are based on a maximum takeoff weight of 323,000 lbs, an operating weight of 149,000 lbs, and a step climb profile whenever possible.

³The maximum ACL is computed without regard to cargo density. It is limited only by aircraft structural limitations and is shown primarily for information. It includes the weight of any passengers carried. It should not be used unless cargo density is known to be high and physical characteristics of the cargo would permit full utilization of the cargo compartment space. When planning a palletized load, the weight of the pallets and nets (354 lbs/pallet) must be subtracted to determine the net transportable load.

⁴Maximum ACL was calculated using 30 minutes to alternate, 45 minutes for holding, and 10 percent reserve fuel over the entire leg.

⁵Crossover density is the point at which the cube constrained payload equals the weight constrained payload when the entire usable volume of the cargo compartment (7,024 cubic feet) is used.

⁶Oversize payloads have been derived from the airlift loading model.

⁷Average palletized payloads shown are exclusive of the weight of the pallet and are based on a 463L system configuration of 13 pallets loaded to an average of 2.3 tons per pallet.

Table 3-15. C-141B Wartime Payload Planning Factors in Tons^{1,2}

(Average, Heavy, and Light Units)

LONGEST LEG OF DEPLOYMENT	MAXIMUM ALLOWABLE CARGO LOAD ^{3,4}	CROSSOVER DENSITY ⁵	PLANNED OVERSIZE PAYLOAD ⁶	PLANNED TOTAL PAYLOAD	PLANNED ACCOMPANYING PASSENGERS	PLANNED BULK PAYLOAD ⁷
AVERAGE UNITS						
1500 NM or Air Refueled	45.0	12.8	24.9	25.0	33	29.9
2500 NM	37.2	10.6	24.4	24.5	29	29.9
3500 NM	26.9	7.7	21.9	21.9	15	23.0
4500 NM	3.5	1.0	3.1	3.1	2	2.3
HEAVY UNITS						
1500 NM or Air Refueled	45.0	12.8	28.9	29.1	29	29.9
2500 NM	37.2	10.6	27.9	28.0	23	29.9
3500 NM	26.9	7.7	23.8	23.8	10	23.0
4500 NM	3.5	1.0	3.1	3.1	3	2.3
LIGHT UNITS						
1500 NM or Air Refueled	45.0	12.8	16.9	17.2	33	29.9
2500 NM	37.2	10.6	16.9	17.1	33	29.9
3500 NM	26.9	7.7	16.4	16.5	29	23.0
4500 NM	3.5	1.0	3.3	3.3	1	2.3

FOOTNOTES:¹Includes operation at 2.25G maneuver load factor.²Fuel requirements computed according to MACR 55-141 and AFR 60-16, MACSUP 1. Payloads are based on a maximum takeoff weight of 343,000 lbs, an operating weight of 149,000 lbs, and a step climb profile whenever possible.³The maximum ACL is computed without regard to cargo density. It is limited only by aircraft structural limitations and is shown primarily for information. It includes the weight of any passengers carried. It should not be used unless cargo density is known to be high and physical characteristics of the cargo would permit full utilization of the cargo compartment space. When planning a palletized load, the weight of the pallets and nets (354 lbs/pallet) must be subtracted to determine the net transportable load.⁴Maximum ACL was calculated using 30 minutes to alternate, 45 minutes for holding, and 10 percent reserve fuel over the entire leg.⁵Crossover density is the point at which the cube constrained payload equals the weight constrained payload when the entire usable volume of the cargo compartment (7,024 cubic feet) is used.⁶Over-size payloads have been derived from the airlift loading model.⁷Average palletized payloads shown are exclusive of the weight of the pallet and are based on a 463L system configuration of 13 pallets loaded to an average of 2.3 tons per pallet.

Table 3-16. C-130E Peacetime Payload Planning Factors in Tons^{1,2}

(Average, Heavy, and Light Units)

LONGEST LEG OF DEPLOYMENT	MAXIMUM ALLOWABLE CARGO LOAD ^{3,4}	CROSSOVER DENSITY ⁵	PLANNED OVERSIZE PAYLOAD ⁶	PLANNED TOTAL PAYLOAD	PLANNED ACCOMPANYING PASSENGERS	PLANNED BULK PAYLOAD ⁷
AVERAGE UNITS						
500 NM	22.2	15.8	9.3	9.6	7	13.8
1000 NM	20.6	14.6	9.3	9.5	8	13.8
1500 NM	19.4	13.8	9.2	9.5	8	13.8
2500 NM	12.3	8.7	8.6	9.0	7	9.2
HEAVY UNITS						
500 NM	22.2	15.8	10.7	11.0	6	13.8
1000 NM	20.6	14.6	10.7	10.9	7	13.8
1500 NM	19.4	13.8	10.5	10.8	7	13.8
2500 NM	12.3	8.7	9.7	10.1	5	9.2
LIGHT UNITS						
500 NM	22.2	15.8	6.5	6.8	9	13.8
1000 NM	20.6	14.6	6.5	6.8	9	13.8
1500 NM	19.4	13.8	6.5	6.8	9	13.8
2500 NM	12.3	8.7	6.2	6.5	8	9.2

FOOTNOTES:

¹Operation is limited to 2.25G maneuver load factor.

²Fuel requirements computed according to MACR 55-141 and AFR 60-16, MACSUP 1. Payloads are based on a maximum takeoff weight of 153,700 lbs, an operating weight of 80,000 lbs, and a step climb profile at 280 KTAS. To make maximum use of step climb capability, supplemental oxygen is required for all accompanying passengers.

³The maximum ACL is computed without regard to cargo density. It is limited only by aircraft structural limitations and is shown primarily for information. It includes the weight of any passengers carried. It should not be used unless cargo density is known to be high and physical characteristics of the cargo would permit full utilization of the cargo compartment space. When planning a palletized load, the weight of the pallets and nets (354 lbs/pallet) must be subtracted to determine the net transportable load.

⁴Maximum ACL was calculated using 30 minutes to alternate, 1 + 15 minutes for holding, and 10 percent reserve fuel over the entire leg. ⁵Crossover density is the point at which the cube constrained payload equals the weight constrained payload when the entire usable volume of the cargo compartment (2,818 cubic feet) is used.

⁶Oversize payloads have been derived from the airlift loading model.

⁷Average palletized payloads shown are exclusive of the weight of the pallet and are based on a 463L system configuration of six pallets loaded to an average of 2.3 tons per pallet.

Table 3-17. C-130E Wartime Payload Planning Factors in Tons^{1,2}

(Average, Heavy, and Light Units)

LONGEST LEG OF DEPLOYMENT	MAXIMUM ALLOWABLE CARGO LOAD ^{3,4}	CROSSOVER DENSITY ⁵	PLANNED OVERSIZE PAYLOAD ⁶	PLANNED TOTAL PAYLOAD	PLANNED ACCOMPANYING PASSENGERS	PLANNED BULK PAYLOAD ⁷
AVERAGE UNITS						
500 NM	24.5	17.4	9.3	9.6	8	13.8
1000 NM	23.3	16.5	9.3	9.6	7	13.8
1500 NM	22.2	15.8	9.3	9.6	7	13.8
2500 NM	19.5	13.8	9.2	9.5	8	13.8
HEAVY UNITS						
500 NM	24.5	17.4	10.7	11.0	6	13.8
1000 NM	23.3	16.5	10.7	11.0	6	13.8
1500 NM	22.2	15.8	10.7	11.0	6	13.8
2500 NM	19.5	13.8	10.5	10.8	7	13.8
LIGHT UNITS						
500 NM	24.5	17.4	6.5	6.8	9	13.8
1000 NM	23.3	16.5	6.5	6.8	9	13.8
1500 NM	22.2	15.8	6.5	6.8	9	13.8
2500 NM	19.5	13.8	6.5	6.8	9	13.8

FOOTNOTES:¹Includes operation at 2,25G maneuver load factor.²Fuel requirements computed according to MACR 55-130 and AFR 60-16, MACSUP 1. Payloads are based on a maximum takeoff weight of 173,000 lbs, an operating weight of 80,000 lbs, and a step climb profile at 290 KSAS. To make maximum use of step climb capability, supplemental oxygen is required for all accompanying passengers.³The maximum ACL is computed without regard to cargo density. It is limited only by aircraft structural limitations and is shown primarily for information. It includes the weight of any passengers carried. It should not be used unless cargo density is known to be high and physical characteristics of the cargo would permit full utilization of the cargo compartment space. When planning a palletized load, the weight of the pallets and nets (354 lbs/pallet) must be subtracted to determine the net transportable load.⁴Maximum ACL was calculated using 30 minutes to alternate, 1 + 15 minutes for holding, and 10 percent reserve fuel over the entire leg.⁵Crossover density is the point at which the cube constrained payload equals the weight constrained payload when the entire usable volume of the cargo compartment (2,818 cubic feet) is used.⁶Outsize and oversize payloads have been derived from the airlift loading model.⁷Average palletized payloads shown are exclusive of the weight of the pallet and are based on a 463L system configuration of six pallets loaded to an average of 2.3 tons per pallet.

g. In determining the number of aircraft required, consider the following:

(1) Allowable cargo load. The initial limiting factor is the ACL. This is a weight-limiting factor expressed in terms of STONs which cannot be exceeded in planning aircraft loads. The ACL is established by the USAF for each type of aircraft for a specific mission. It is based on location of departure and arrival airfields, weather, en route winds, and other mission-oriented information. ACL can be determined by subtracting empty (operating) weight and fuel required for the longest leg from the maximum allowable takeoff gross weight. For purposes of gross planning, MAC provides a planning ACL. While valid for use in planning, a specific ACL should be developed for execution of a given operation order since the assumptions on which the planning ACL was based may differ from those conditions existing at that time.

(2) Weight method. Once the aircraft ACL planning factor (ACL-PF) and the unit's weight and strength are known, gross airlift requirements can be determined using the weight method. This amounts to nothing more than dividing the total weight of personnel, equipment, and vehicles by the ACL-PF to determine the number of aircraft needed to lift the unit. The weight method is inaccurate because it ignores three constraints on aircraft load capacity: the bulk (dimensions) of individual unit equipment to be loaded, the cargo compartment dimensions, and the structural characteristics of the aircraft.

(3) Modified weight method. Certain refinements can make the weight method a more reliable estimator of airlift requirements. First, personnel can be excluded from weight computations basing personnel deployment plans on the number of spaces available on cargo missions. Second, the USAF has accumulated considerable planning data based on repeated deployment of various Army forces. It is apparent that using the same ACL for an armored division and an airborne division would present a very distorted view of airlift requirements. The armored division, because of its high-weight and high-density equipment, would more closely represent the actual ACL. A lighter organization would tend to cube out before

approaching the ACL. Thus, experience in deploying Army forces permits the USAF to establish ACL-PF for each type unit to be moved. Using these ACL-PF, actual airlift requirements can be approximated, although this is still less accurate than the type load method. Once the total of passengers, the bulk and oversize cargo (STONs) to be moved, the outsize cargo in STONs (transportable in C-5 only), and the number of passengers who can accompany cargo are known, the following procedures can be used to determine airlift requirements.

The modified weight method estimate formulas are as follows:

$$\frac{\text{Outsize cargo (STONs)}}{\text{C-5 ACL-PF}} = \text{C-5 sorties}$$

$$\frac{\text{Oversize cargo (STONs)}}{\text{C-141B ACL-PF}} = \text{C-141B sorties}$$

$$\frac{\text{Bulk cargo (STONs)}}{\text{C-141B ACL-PF}} = \text{C-141B sorties}$$

$$(\text{C-5} \times \text{accompanying passengers})$$

+

$$(\text{C-141B sorties} \times \text{accompanying passengers})$$

=

$$\text{Total accompanying passengers}$$

It is important to note that C-141B sorties with fully palletized loads (using all available pallet positions) will not carry passengers.

h. These computations incorporate the fundamental approach to gross airlift estimates. Initially, plan to use C-5 aircraft to move only outsize cargo (that is, cargo which cannot be moved by other air means); and initially, plan to move all other cargo in C-141B aircraft. Subsequent adjustments can be made. A sample computation for an average unit moving 2,500 miles under wartime conditions is given below.

Passengers	= 14,128 (individuals)
Outsize Cargo	= 1,580.1 STONs
Oversize Cargo	= 10,540.8 STONs
Bulk Cargo	= 986.7 STONs
C-5 ACL-PF Outsize	= 68.7 STONs
C-141 ACL-PF Oversize	= 24.4 STONs
C-141 ACL-PF Bulk	= 29.9 STONs

Bulk cargo is cargo that must be palletized or floor loaded. Do not include accompanying passengers on palletized loads.

$$\text{Step 1: } \frac{1,580.1}{68.7} = 23 \text{ C-5 sorties}$$

$$\text{Step 2: } \frac{10,540.8}{24.4} = 432 \text{ C-141B sorties}$$

$$\text{Step 3: } \frac{986.7}{29.9} = 33 \text{ C-141B sorties}$$

Step 4:

$$23 \times 28 = 644 \text{ accompanying passengers (C-5)}$$

$$432 \times 29 = 12,528 \text{ accompanying passengers (C-141B)}$$

$$\text{Total } 13,172 \text{ accompanying passengers}$$

Step 5: Remaining passengers (14,128 - 13,172 = 956) will be moved by C-141 at 140 passengers per aircraft

$$\frac{956}{140} = 7 \text{ (rounded up) additional aircraft required}$$

SECTION IV. WATER TRANSPORT PLANNING

3-15. OCEAN TERMINAL PLANNING.

a. Approximately 95 percent of all tonnage arriving in a theater of operations is water-borne. Planners must know how to estimate the capacity of a port or beach and to determine what terminal units are needed to receive, process, and clear troops and cargo through the port or beach terminal. The planning figures and methods discussed in this section will allow the planner to make reliable estimates.

b. Ocean terminal planning involves six basic steps. Each step develops logically from the preceding one. Each of the following subparagraphs discusses one of the six terminal planning steps.

(1) Determine the type or category of existing terminals; for example, container, roll on/roll off (RO/RO), break bulk, special commodity (ammunition), or a composite capability listing for terminals which are multipurpose.

(2) Estimate the existing terminal throughput capacity. This is an estimate of the total tonnage and personnel that can be received, processed, and cleared through the terminal in a day, using only the existing facilities. (A day is equal to two 10-hour shifts, plus two 2-hour maintenance periods.)

(3) Compute the terminal work load required to support the operation. The work load is expressed as numbers of personnel and containers and as STONs of break-bulk cargo and other noncontainerized cargo. This computation, like the throughput estimate, includes the total tonnage and personnel that must be received, processed, and cleared through the terminal.

(4) Determine the required repair and rehabilitation of existing facilities and new construction necessary to increase existing terminal throughput capacity to equal the computed terminal work load. Generally, the work load required to support operations is greater than existing terminal capacity.

(5) Estimate the materials-handling equipment necessary to process the required work load through the terminal with maximum efficiency. Such equipment as floating cranes, tugs, barges, and troops to man them can be selected from TOE 55-530. TOE 55-560 lists the various teams, personnel, and equipment necessary to augment terminal operations.

(6) Estimate the units, individuals, and supervisory and command elements needed to operate the terminal. This estimate includes phasing in units to handle the work load as tonnages increase.

3-16. TERMINAL THROUGHPUT CAPACITY ESTIMATES.

a. Terminal throughput capacity is the estimated daily tonnage (break bulk, containers, and Class VII) and numbers of personnel that can be brought into, discharged, and cleared from the terminal. Terminal throughput capacity is determined by three direct factors: terminal reception capacity, terminal discharge capacity, and terminal clearance capacity. Other factors include terminal transfer and storage capacity and will be discussed separately.

(1) Terminal reception capacity is based on the number of ships, by type, that can be berthed or anchored in the terminal's working area. Reception capacity is based solely on the physical berthing and docking facilities of the terminal as follows:

(a) Based on the ability to accommodate vessels at a fixed pier suitable for discharge operations:

Break-bulk ships @ _____ STONs/day = _____ STONs/day

Container ships @ _____ containers/day = _____ containers/day

RO/RO ships @ _____ MTONs/day = _____ MTONs/day

Total of (1)(a) = _____ STONs/day

_____ containers/day
_____ MTON/day

(b) Based on ability to accommodate vessels at an offshore/in-the-stream anchorage location suitable for discharge operations:

Break-bulk ships @ _____ STONs/day = _____ STONs/day

Container ships @ _____ containers/day = _____ containers/day

RO/RO ships @ _____ MTONs/day = _____ MTONs/day

_____ MTONs/day

Total of (1)(b) = _____ STONs/day

_____ containers/day

_____ MTONs/day

Reception capacity is the total of (1)(a) and (1)(b) above.

(2) Terminal discharge capacity includes the number of vessels that can be discharged concurrently and is expressed in STONs, containers, MTONs, or numbers of personnel that can be unloaded and placed on the wharf or transport as follows:

(a) Capacity based on number of working fixed berths plus lightering capacity:

Amphibious units = _____ STONs/day, _____ containers/day (ships in stream)

Boat companies = _____ STONs/day, _____ containers/day (ships in stream)

Ships at pier = _____ STONs/day, _____
containers/day, _____ MTONs/day

Total _____ STONs/day,
_____ containers/day, _____ MTONs/day

(b) Capacity based on personnel/equipment availability (number of terminal service units and local national longshoremen):

Terminal services company (break bulk) = _____ STONs/day

Terminal services company (container) = _____ containers/day

Terminal service companies for RO/RO ship discharge = _____ MTONs/day

Discharge capacity is the lesser capacity, by category, of (2)(a) or (2)(b) above.

(3) Terminal clearance capacity is the number of troops and cargo tonnage that can be moved out of the terminal area daily. This capacity depends predominantly on rail, highway, and sometimes on inland waterways. As in the case of terminal discharge capacity, clearance capacity is the lesser of two separate capacities, specifically the physical capacity of the clearance mode(s) and the availability of personnel/equipment dedicated to loading the clearance mode as follows:

(a) Rail clearance capacity:

Physical capacity = _____ STONs/day

_____ containers/day

_____ MTONs/day

Personnel and equipment = _____ STONs/day

_____ containers/day

_____ MTONs/day

Rail capacity (lesser of physical or personnel equipment capacity) = _____ STONs/day
_____ containers/day
_____ MTONs/day

(b) Highway clearance capacity:

Physical capacity = _____ STONs/day

_____ containers/day

_____ MTONs/day

Personnel and equipment = _____ STONs/day

_____ containers/day

_____ MTONs/day

Highway capacity or capability (lesser of physical or personnel/equipment capacity) = _____ STONs/day
_____ containers/day
_____ MTONs/day

(c) Inland waterway clearance capacity:

Physical capacity = _____ STONs/day

_____ containers/day

_____ MTONs/day

Personnel and equipment = _____ STONs/day

_____ containers/day

_____ MTONs/day

Inland waterway capacity = _____ STONs/day

or capability (lesser of physical or personnel/equipment capacity) = _____ containers/day

_____ MTONs/day

(4) Summary includes —

(a) Reception capacity = _____ STONs/day,
_____ containers/day, _____ MTONs/day.

(b) Discharge capacity = _____ STONs/day,
_____ containers/day, _____ MTONs/day.

(c) Clearance capacity = _____ STONs/day,
_____ containers/day, _____ MTONs/day.

Terminal throughput is the least of (a), (b), or (c) above.

b. In all instances, the lesser of these three capacities is the determining capacity for estimating the terminal throughput capacity. Even though 5,000 STONs of cargo can be brought into the terminal and discharged into the wharves daily, if only 4,000 STONs can be cleared, the terminal throughput capacity is 4,000 STONs. All three capacities must be estimated as accurately as possible even if the limiting capacity is apparent. Only by estimating all three can it be determined where improvement can yield the greatest return in terms of increased throughput capacity.

c. As stated, cargo transfer and storage considerations impact significantly on discharge capacity. Any factor which slows or stops discharge operations is undesirable. Frequently, a shortfall in cargo transfer or storage capacity will result in pier congestion to the extent that discharge operations are diminished or even stopped. The planner must consider cargo transfer and storage capacity when estimating terminal discharge capacity.

d. Threat and weather elements in Table 3-18 must be considered in the final staff estimate, but these elements are not a function of the estimating process. Other considerations are included in the estimation checklist.

Table 3-18. Terminal Capacity Estimation Checklist

Collect these data:	Complete these factors:	To determine:
Channel depths Obstructions Enemy air activity Enemy surface activity Enemy submarine activity Climate and seasons Weather and its characteristics Minefields or contaminated areas Capabilities in combating obstacles Tactical dispersion requirements Wharf facilities Beach capabilities Discharge rates ashore Anchorage area Extent of destruction or contamination	(1) Evaluate to determine water terminal reception capacity	Water terminal throughput capacity for importing cargo only; retrograde operations will reduce the import capacity
Climate and seasons Weather and tide characteristics Cargo-handling equipment available Floating craft and equipment available Transit sheds and areas Availability of local labor Space reserved for local economy Enemy activity Capacity of rail facilities		
Capacity of highway facilities Capacity of inland waterway facilities Capacity of pipeline facilities Capacity of air facilities Enemy activity	(2) Evaluate to determine water terminal discharge capacity	
	(3) Evaluate to determine water terminal clearance capacity	

3-17. CLASSIFICATION OF BERTHS.

a. Deep-draft wharfage must be provided whenever pier-side discharge is contemplated. Shallow-draft wharfage and anchorage areas must be given joint consideration when discharge to lighter is contemplated.

placed. Berths and anchorages are classified on the basis of anticipated vessel traffic. Berths are also classified according to wharf dimensions and pier-side water depth. Table 3-19 provides berth classifications and dimensions as well as the classification of anchorage berths. A typical layout of port facilities is

shown at Figure 3-1.

b. A wharf is classified as deep-draft when water alongside the wharf is deep enough to permit a fully loaded deep-draft ship to tie up. The following criteria govern classification:

Table 3-19. Classification of Berths

ALONGSIDE BERTHS				ANCHORAGE BERTHS			
GENERAL BERTH DIMENSIONS		TANKER BERTHS		WATER		WATER	
CLASS	LENGTH	DEPTH	CLASS	LENGTH	DEPTH	CLASS	LENGTH
A	1,000 ft	34-36 ft	T-A	1,200 ft	50-75 ft	I	Over 2,400 ft
B	850 ft	30-34 ft	T-B	800 ft	35-50 ft		over 38 ft
C	700 ft	22-30 ft	T-C	400 ft	20-35 ft	II	1,500-2,400 ft
D	550 ft	17-22 ft	T-D	250 ft	14-20 ft		30-38 ft
E	400 ft	13-17 ft				III	900-1,500 ft
F	100 ft	6-13 ft					20-30 ft
							Large naval or commercial passenger ship
							Standard oceangoing vessel
							Destroyer or small cargo vessel

Anchorage berth diameter formula:
 $2 (4D + 2L) = \text{diameter in feet}$

D = depth of water in feet
 L = length of vessel in feet

(Diameter in feet = .3048 diameter in meters. Bottom characteristics, landmarks, and underwater obstacles must be taken into consideration when selecting an anchorage site.)

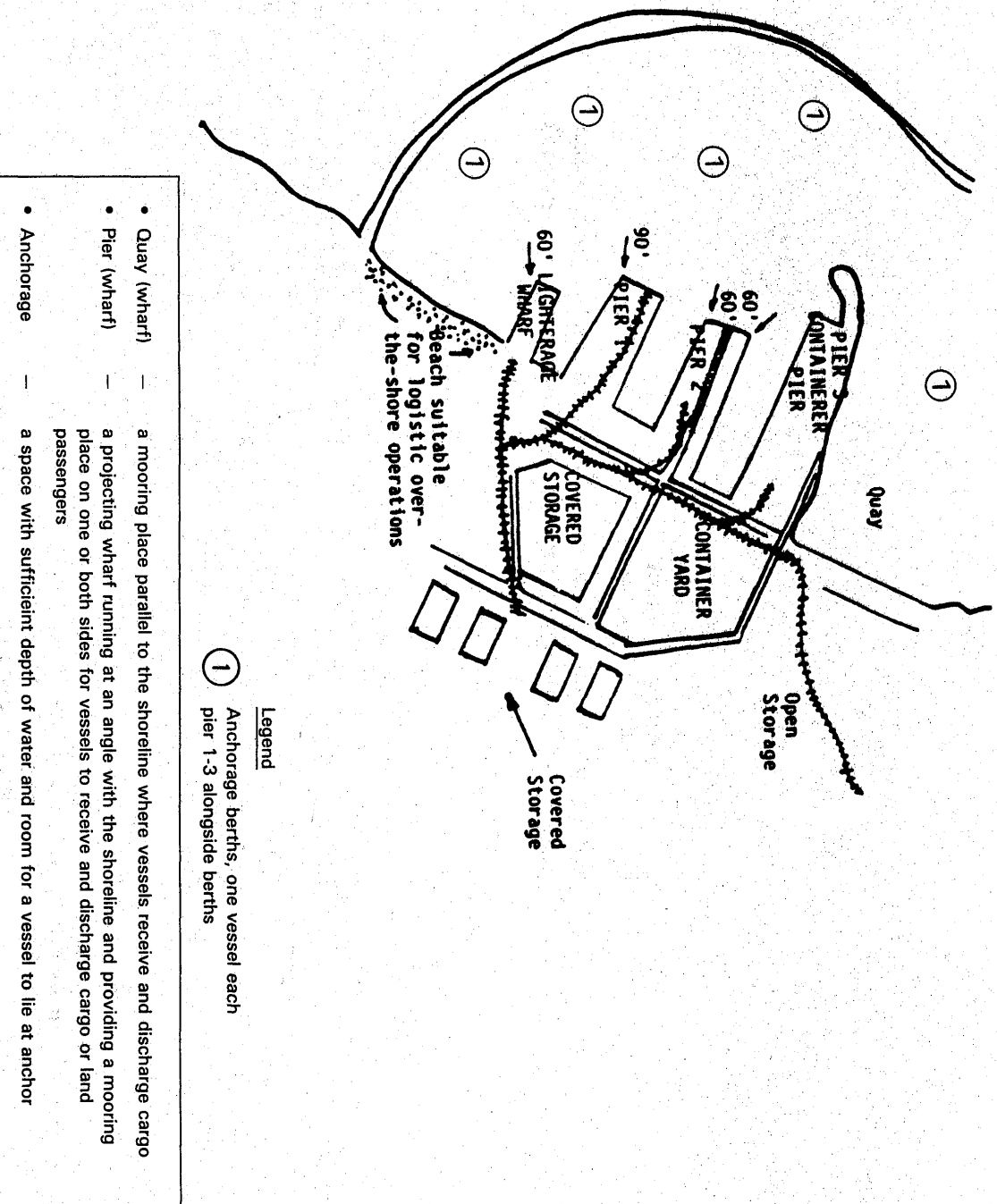


Figure 3-1. Port Facilities

(1) Water depth should not be less than 36 feet at low tide. For planning purposes a minimum of 32 feet (9.76 meters) should be used because this depth will accommodate virtually all break-bulk/container ships. To determine a specific vessel's maximum rated draft, refer to the Military Sealift Command "Ship Register." To determine a ship's arrival draft, refer to the cargo traffic message as required by DOD Reg 4500.32R.

(2) Vessels require 60 to 75 feet (18.0 to 22.9 meters) of wharf space in addition to their measured length overall (LOA). This additional length is required to allow for the stretching of ship mooring lines so that the vessel can accommodate the water level fluctuations created by tides. Failure to provide for this tolerance could cause damage to the wharf or mooring lines. The LOA of the vessel is found by obtaining required information from the sources used to determine vessel draft. Any additional length of berth not used in mooring the ship may be considered for lighterage.

(3) To allow for cargo discharge on piers containing buildings, the wharf apron should be at least 60 feet (18.3 meters) wide. An equal space requirement exists for either side of a pier (for example, 120 feet of apron required for pier docking ships on both sides). For an open pier, the overall width of the pier should be at least 90 feet (27.45 meters). Anything less can create congestion and reduce cargo discharge rates.

3-18. COMPUTATION OF PORT ORGANIC DISCHARGE CAPABILITY. Consider the following factors in computing discharge capability:

a. Break-bulk berth. Operating on a 20-hour basis, with 75 percent availability of cargo handling equipment, 1,000 STONs of break-bulk cargo can be discharged each day alongside each berth. In planning retrograde operations, 500 STONs per day, alongside each berth, is the factor utilized.

b. Lighters berth. Using one crane per lighter during discharge operations, the berth should discharge 300 STONs of break bulk, 450 STONs of ammunition, or 200 containers per day. When planning the backloading of lighters, use one-half discharge rate of break bulk and ammunition. Container backloading should be the same as discharge, unless loading and unloading operations are conducted simultaneously. (See paragraph 3.18.d.)

c. Per RO/RO berth. Loading and discharging rates for various classes of RO/RO vessels vary significantly. Military Sealift Command (MSC) RO/RO vessels, with a variety of cargo and tiedown requirements, load and discharge at a slower rate than commercial vessels. Since MSC vessels are loaded under conditions more likely to be encountered during a military contingency, their short-term rate of 600 measurement tons or 3,898 square feet per hour is recommended for planning purposes.

d. Underdeveloped container berth. The discharge rate of 300 containers per 20-hour day is applicable when offloading or loading containers using US Army heavy-lift cranes working at anchor alongside a ship in an underdeveloped fixed port. If backloading is conducted simultaneously with offloading, the backloading rate will equal about one-half of the discharge rate for offloading only which would equate to about 150 containers.

e. Developed fixed container terminal. When using container-handling cranes at a fully developed container facility, the simultaneous discharge and loading rate can be expected to be between 700 and 800 containers per 20-hour period. The rate of discharge at any container terminal depends on the type of container-handling equipment, type of ship being worked, and the experience of the personnel operating the equipment. The size of the container has no bearing on the rate of discharge. If the container-handling and transporter equipment is available, all containers can be handled at the same rate.

f. Lighter aboard ship (LASH). Ship discharge rate is one lighter every 15 minutes and one container every 3 minutes.

g. Sea barge (SEABEE). Ship discharge rate is two barges every 25 to 30 minutes and one container every 3 minutes (if containers are carried instead of barges on main deck).

h. Terminal. Compute the terminal's ability to receive cargo from vessels. This computation is based solely on the equipment that is organic to the port. It does not include personnel, units, and unit equipment.

3-19. ESTIMATE OF OPERATING PERSONNEL AND EQUIPMENT DISCHARGE CAPACITY FOR WATER TERMINALS.

a. A balanced operating force and suitable equipment ensure maximum efficiency in terminal operations. During the planning and operational phases, planners must establish and maintain a balance. The possibility of using civilian and prisoner-of-war labor, particularly in later expansion of the water terminal, should be considered.

b. Operating personnel are categorized as management or supervisory personnel, headquarters and headquarters company, terminal battalion, and functional operating units. Operating units can include terminal service companies and battalions, truck companies, engineer units, watercraft units, and other units required in the actual operation of a water terminal.

c. FMs 55-17, 55-50, and 55-60 contain details on the operation and capacity of terminal-operating equipment. Tables 3-20 and 3-21 show characteristics of Army and Navy small landing craft and amphibian vehicles. The port's discharge capacity may be computed using the troop list of available terminal service companies, transportation boat units, and known civilian/host nation support available.

Table 3-20. Characteristics of Small-Landing Craft

1	2	3	4	5	6	7	8	9	10	11	12	13	14
LIN	NAME	SYMBOL	LENGTH (ft/in)	BEAM (ft/in)	CAPACITY TROOPS OR LOAD (Number)	TROOPS OR LOAD (L Ton)	DRAFT Forward (ft)	(Loaded) (Aft)	SPEED LOADED (Knots)	RANGE (NM)	CREW	WEIGHT EMPTY (L TON)	CARGO/SP DIMENSION (ft/in)
L36739	Landing Craft, Mechanized (Mark VIII)	LCM(8)	73' 6"	21"	200	53.5	3'	5'	9.0	271	6	60	42' 9" by 14' 6" by 4' 3"
L36876	Landing Craft, Utility (1466 Class)	LCU	115' 1"	34'	300	150.0	4'	6'	6.5	700	11	180	52' by 29' 6" by 4' x 6" 22' by 14' 4" 4' by 6"
UC1667	Landing Craft Utility	LCU	135' 1"	29' 9"	455	184.0	4' 6' 8"	6' 8"	11.0	1200	14	250	105' by 17'

Table 3-21. Characteristics of Amphibious Vehicles

1	2	3	4	5	6	7	8	9	10	11	12	13	14
LIN	NAME	SYMBOL	LENGTH	BEAM	CAPACITY TROOPS OR CARGO (Number)	TROOPS OR CARGO (L TON)	Land (Kmph)	Water (Knots)	Land (Kmph)	Water (Knots)	CREW	WEIGHT EMPTY (L TON)	EXAMPLE MATERIAL CARRIED
D10990	Carrier Cargo, full-tracked, amphibious	M116	15' 7"	6' 10"	13	1.34	45.0	3.4	258	19.8	1	3.52	14 passengers (including crew)
L37030	Landing vehicle, tracked, engineer, model 1	LVTE-1	39' 9-1/4"	12' 8 1/2"	—	—	40.0	5.4	298	120.0	7	36.90	None
L37118	Landing vehicle, tracked, (Mark V)	LVT-5	29' 8"	11' 8 1/2"	34 (land) 25 (water)	8.05 (land) 5.35 (water)	45.0	6.7	301	50.0	8	31.20	105-mm howitzer with crew and 100 rounds of ammunition
L37132	Landing vehicle, tracked recovery, model 1	LVT-1	31' 9"	11' 8 1/2"	—	—	48.0	6.0	354	57.0	8	33.50	600 cu ft available with recovery equipment removed from cargo compartment
—	Landing vehicle, tracked	LVT(A)-5	27' 2 1/2"	10' 10"	—	—	32.0	5.6	242	50.00	5	15.70	None

Landing vehicle, tracked (Mark XI)	LVTH-6	21' 7"	11' 8½"	—	—	45.0	6.7	301	45.0	5	87.80	None
Landing vehicle, tracked (Mark VI)	LVTP-6	21' 7"	10' 9"	20	—	56.0	6.5	306	45.0	3	17.90	Bulk cargo
L67234 Lighter, amphibious, wheeled (LARC-5)	LARC-5	35'	10'	0 (20)	4.56 (4.50)	48.8	8.6	322	40.0	2	8.48	Unitized cargo
L67371 Lighter amphibious wheeled (LARC-5)	LARC-15	45'	14' 6"	0 (50)	13.40	47.5	8.1	418	45.0	8	19.00	1 loaded 2½-Ton truck or 10 palletized units
L67508 Lighter amphibious, wheeled (LARC-60)	LARC-60	62' 6¼"	26' 7"	125 (200)	53.60 (89.30)	22.5	6.1	241	75.0	4	87.00	Heavy bulky equipment
Lighter air cushion vehicle-30 ton	LHCV-30	77'	38'	To Be Determined		12	20	unk	320	4	20.15	Containers Limited weight vehicle

CONSIDERATION:

- Figures in parentheses in columns 6 and 7 denote emergency capacity. No consideration needs to be given to the draft of amphibious vehicles. However, consideration must be given to the characteristics of the landing area that may affect beaching, such as mud, coral, or rock formations.

3-20. LOGISTICS OVER THE SHORE (LOTS) OPERATIONS.

a. Logistics over the shore (LOTS) operations are cargo discharge operations that use lighterage to transfer cargo from an ocean-going vessel to a shoreside facility for subsequent discharge to land transport or temporary storage. These operations are inherently less efficient than direct pier-side discharge operations and should not be used any longer than necessary. Lighterage can discharge cargo to a fixed port facility, unimproved port facility, or a bare beach facility. Bare beach is the least efficient and most complex of possibilities and will be the subject of this section.

b. Beach terminal planning requires making a beach capacity estimate and involves the same steps used in planning for a fixed ocean terminal. Tables 3-22 and 3-23, as well as Figures 3-2 and 3-3, provide

essential information and definitions relative to this estimation. The following items must be investigated to determine their effect on operations:

- Weather — wind, fog, rainfall, temperature.
- Sea area — extent, depth of water, type of bottom, vulnerability to seawave action.

Table 3-22. Beach Gradients in Feet

Steep	More than 1 in 15
Moderate	1 in 15 to 1 in 30
Gentle	1 in 30 to 1 in 60
Mild	1 in 60 to 1 in 120
Flat	Less than 1 in 120

Table 3-23. Beach Materials and Particle Diameters

Material	Particle Diameter	
	In Microns ¹	In Inches
Boulder	256,000 and over	10.24 and over
Cobble	256,000-64,000	10.24-2.56
Stone	64,000-4,000	2.56-0.16
Pebble	4,000-2,000	0.16-0.08
Very coarse sand	2,000-1,000	0.08-0.04
Coarse sand	2,000-500	0.04-0.002
Medium sand	500-250	0.002-0.001
Fine sand	250-125	0.001-0.0001
Very fine sand	125-62.5	0.0001-0.000025
Silt	62.5-3.9	0.000035-0.0000156

FOOTNOTES:

¹A micron is approximately 0.00003937 inch.

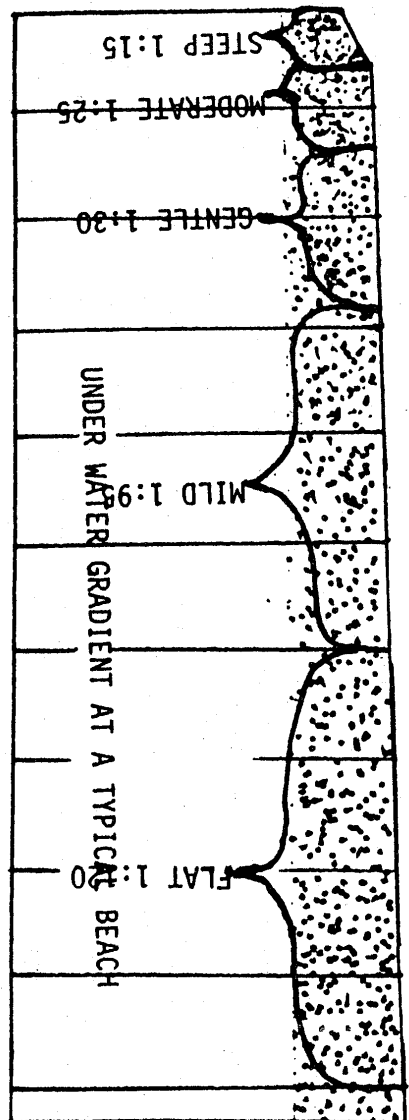


Figure 3-2. Profile View of Underwater Gradient

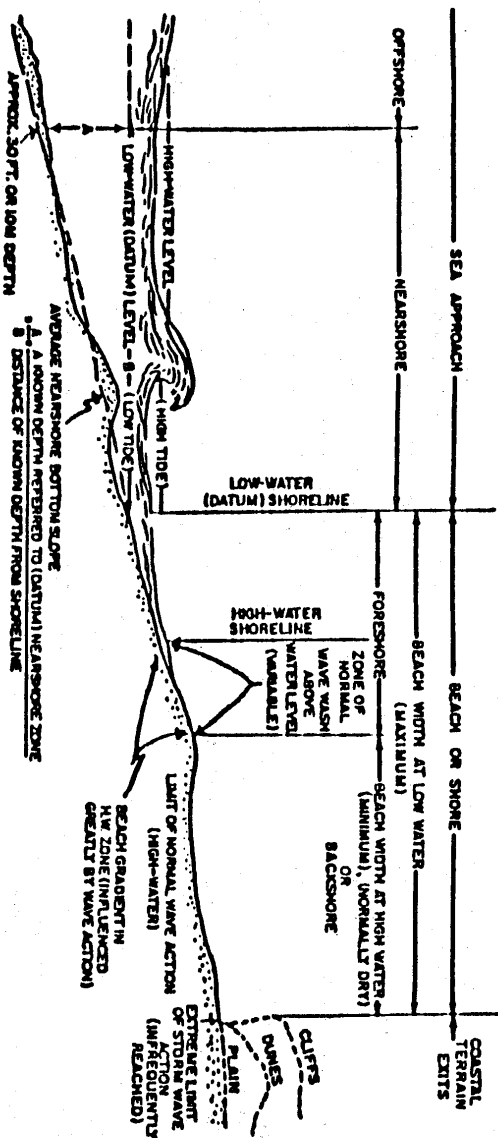


Figure 3-3. Marine Beach Profile Diagram

(3) Beach approaches—reefs, bars, man-made obstacles, tide, type of bottom, surf condition, underwater gradient.

(4) Beach — gradient, composition, length, width, wave effect, exits.

(5) Hinterland — depth, concealment, transportation net capability.

c. The same materials-handling functions as those in a conventional port situation are performed, but more cranes and forklift trucks which can traverse sand and soft terrain are required. Amphibians should be used to relieve congestion at the water's edge and to eliminate unnecessary handling of cargo.

3-21. INLAND WATERWAY (IWW) SYSTEM.

a. Inland Waterways (IWWs) include all rivers, lakes, inland channels, canals of sufficient depth to accommodate waterborne traffic, and protected tidal waters. In a theater of operations, an IWW is normally operated as a complete system and includes the locks, dams, bridges, and other structures that contribute to or affect the movement of vessels carrying passengers and freight. IWWs are principally used for the civilian economy. Military use depends on the degree of waterway development, necessary rehabilitation, tactical situation, and the impact that military use of the waterway will have on the civilian economy.

b. The IWW in a generic theater or in CONUS is operated and maintained by the US Army Corps of Engineers. In overseas theaters that have developed IWW systems, the host nation operates and maintains IWW systems.

c. Three separate functional components make up an IWW system. These are the ocean reception point (ORP), the IWW, and the inland waterway terminal (IWWT). The transportation planner must estimate the capacity of each of these functional components with the lesser capacity becoming the capacity for the IWW system.

d. Use of the system by the US Army must be granted by the host nation. Once the host nation has approved integration of the US Army into their IWW system, equipment requirements (to include equipment allocated by the host nation) must be determined.

3-22. OCEAN RECEPTION POINT (ORP).

a. An ORP consists of mooring points for ships, a marshaling area for barges or other lightering, and a control point. There should be at least two stake barges at each ORP, one for import cargo and one for export. LASH, SEABEE, container, and general-cargo vessels may discharge at an ORP. Because of the rapid discharge capability of LASH and SEABEE vessels, the ORP should have sufficient wharf space to handle twice the barge capacity of that type of ship or, under the stake barge system, sufficient water space with enough stake barges to accommodate the same amount of barges as the wharf space. Barges can be the preloaded variety such as those discharged from LASH/SEABEE vessels, or they can be barges or other lightering loaded from container or general cargo vessels. In either instance, there must be sufficient wharfage or stake barge space to handle barges from the current working ship(s) as well as returning empty barges from previous working vessels.

b. The reception capacity, discharge capacity, and clearance capacity of an ORP are computed in the same manner as for an ocean terminal with minor differences. ORP clearance capacity is the number of personnel, containers, barges, or STONs of cargo that can be moved from the ORP via the IWW. Whereas terminal transfer and storage capacity influence terminal discharge capacity, tugs, and barges (terminal transfer) and wharfs or stake barges (storage) also influence ORP discharge capacity. Careful analysis must be completed to determine the space required and available for stake barges, the space required to move barges to and from the stake barge, the transit time between the ship and the stake barge or wharf, and other considerations incidental to cargo (barge/lightering) transfer and storage.

c. Determination of barge and tug requirements in support of ORP operations requires thorough analysis of several interrelated factors. ORP operations are those activities associated with vessel discharge and the movement of barges to and from the vessel to the wharf or stake barge to include shifting of barges at the wharf or stake barge incidental to vessel discharge operations. The number of barges required is a function of daily tonnage, cargo consistency (general cargo, vehicles, and containers), barge capacity, and turnaround time on the IWW. This last factor is significant since sufficient barges must be available to sustain vessel discharge operations until such time as loaded barges can be towed to inland terminals, discharged, and returned to the ORP for reloading. If estimates indicate that 6 barges a day can be loaded shipside and turnaround time on the IWW is 2.5 days, the ORP will require 15 barges (2.5 x 6) to sustain discharge operations until such time as the first barge is returned for reloading. Tug requirements for ORP operations can be determined after analysis of ORP turnaround time (stake barge to vessel and return) and number of barges per tow.

3-23. INLAND WATERWAY PLANNING.

a. The transportation planner's interest is in an IWW's capability to move cargo. Consequently, the planner is interested in the effect the waterway's physical features have on its ability to carry cargo. Among the physical features that determine what can be moved over a waterway are the restricting width and depth of channel, horizontal and vertical clearance of bridges, number of locks, how the locks operate, and the length of time required for craft to clear the locks. Freeze-ups, floods, and droughts also affect a waterway's capacity. The planner must know when to expect these seasonal restrictions and how long they can be expected to last. The planner is concerned with speed, fluctuation, and direction of water current as well as availability of craft, labor, terminal facilities, and maintenance support.

b. On an IWW, one of two possible situations will determine the method for calculating the waterway ca-

pacity. The following subparagraphs discuss both situations:

(1) Seldom are a sufficient number of watercraft or barges available to fill or exceed the capacity of an IWW. However, if this situation exists, the daily capacity can be established by determining the number of craft per day that can be passed through the most limiting restriction — a dock, lift bridge, or narrow channel — and by multiplying this figure times the average net capacity of the barge or craft in use.

(2) When the capacity of a waterway is so large or the availability of barges so limited that there are insufficient barges to fill or exceed the waterway capacity, the following formula can be used to compute the number of tons a given number of barges can move a given distance each day:

$$F = \frac{H \times G \times E}{A}$$

Where:

F = Daily tonnage

H = Number of barges required or available

G = Tons per barge

E = Hours of operation per day

A = Turnaround time for barges in hours

c. Turnaround time is the length of time between leaving a point and returning to it. Since barges are being picked up at a wharf or stake barge, barge-loading time is not part of the computation. If barges are picked up at shipside without marshaling at a wharf or stake barge, loading time of the barge becomes a factor of turnaround time. The following subparagraphs discuss items that must be known to calculate turnaround time:

(1) Length of haul is the round-trip distance between the barge pickup point and unloading points.

(2) Speed is influenced by wind, current, power of craft, and size of load. If the craft's speed cannot be determined, assume it to be 4 miles (.4 kilometers) per hour in still water. Speed and direction of current can frequently be discounted since resistance in one direction may be balanced by assistance in the other direction although this is not always the case.

(3) Loading and unloading time is the time to load and unload a craft at origin and destination.

(4) Time consumed in locks is the time taken by a craft and its tow to pass through a lock. When exact data are lacking, lock time can be assumed to be 45 minutes.

(5) Hours of operation per day are usually planned as 20. Dropping barges from the tow, refueling, taking on stores, rigging up, and maintenance consume the remaining 4 hours.

(6) Transit time is the time to move the craft the length of the haul and return it to origin.

d. Transit time equals the distance divided by the speed of the craft. There are separate formulas for computation of turnaround times in days or hours and for barges and tugs. Barge turnaround times may include loading time but they always include unloading time. Loading and unloading times do not apply to tugs. The formulas are as follow:

$$K = \frac{\text{Days}}{24 \text{ Hours Per Day}} \frac{B + C + D}{\text{Barges}} \quad A = B + C + D \quad \text{Hours}$$

$$L = \frac{\text{Days}}{C + D} \frac{\text{Tugs}}{\text{Hours}} \quad M = C + D$$

Where:

A = Barge turnaround time in hours

B = Loading/unloading time per barge

C = Transit time

D = Locking time

E = Hours per day

K = Barge turnaround time in days

L = Tug turnaround time in days

M = Tug turnaround time in hours

e. Barge and tug requirements:

(1) Barge and tug requirements for container-ships, LASH, and SEABEE ships, and RO/RO ships cannot be figured on the basis of tons carried. For LASH and SEABEE vessels, loading time is completely omitted from the turnaround time formula at both the ORP and the IWW. Discharge tonnages for containers is expressed in terms of containers per hour and tonnages certainly exceed the barge break-bulk cargo discharge rate of 30 STONS per hour used for general planning. Barge and tug requirements for these categories of vessels depend on the sizes of tugs available, restrictions on the number of barges per ton, and number of barges available.

(2) To determine the number of barges needed to move a given number of measurement tons (MT's) a given distance each day, use this formula:

$$H = \frac{F}{G} \times \frac{A}{E}$$

Where:

H=Number of barges required

F=Daily tonnage

A=Turnaround time in hours

G=Tons per barge

E=Hours of operation per day

(Since turnaround time in hours must be known to determine the number of barges required, turnaround time must be computed first.)

(3) Once the number of barges required to perform a given task has been determined, the number of tugs or towboats needed to tow the barges can be computed with the following formula:

$$J = \frac{H}{I} \times \frac{L}{K}$$

Where:

J =Number of tugs required

H=Number of barges required or available

3-26. NET TRAINLOAD. The net trainload or payload carried by trains on different divisions of the same line may vary greatly depending on the conditions of operations. Experience indicates that under normal theater of operations conditions over standard-gauge railways, a single-engine net trainload of 500 STONS may be used as an average for planning purposes. On narrow-gauge railways, a single-engine net trainload of 375 STONS may be used. These planning data are conservative and normally can be revised upward once better intelligence data have been received. (Refer to

I =Number of barges per tow

K=Turnaround time for barges in days

L=Turnaround time for tugs in days

(Turnaround times for barges and tugs must be computed before this formula can be applied.)

3-24. INLAND WATERWAY TERMINALS.

An IWW terminal is staffed by appropriate transfer units required depends on the results of an IWW terminal throughput estimate (Paragraph 3-16). A throughput analysis should be conducted for each IWW terminal in the IWW system. The combined capacity of the IWW terminals is the cumulative total of the restricting capacity (reception capacity, discharge capacity, or clearance capacity) for each individual IWW terminal.

3-25. INLAND WATERWAY SYSTEM CAPACITY.

a. After determining the estimated capacity of the three functional components of the IWW system, the lesser of the three capacities will be used as the esti-

mated capacity for the entire IWW system. See the following comparisons:

IWW System Capacity

ORP	IWW	IWWT
3,000 tons per day	2,000 tons per day	2,500 tons per day

b. Once the capacity of the IWW system has been determined, personnel requirements for each component of the IWW system can be determined. If host nation personnel are to support part of the IWW system, only the US Army personnel augmentation need be determined.

c. When determining equipment needed to support the IWW system, the planner must first determine the numbers and capabilities of barges and tugs which the host nation will allocate to the US Army. This will allow determination of the US Army equipment augmentation requirement. When deciding which equipment is best suited for the IWW system, see TM 55-500. Numbers of barges and tugs to support the IWW system can be computed by using the formulas shown in Paragraph 3-23.

SECTION V. RAIL TRANSPORT PLANNING

FM 55-20 and STANAGs 2171, 2173, 2175, 2832, and 2890 for rail operations in a theater of operations.)

3-27. NET RAILWAY DIVISION TONNAGE.

a. Net railway division tonnage is that net tonnage (STONS) or payload that can be moved over a railway division (90×150 miles) each day. (Formula: Train density×average net trainload=net railway division tonnage.) When computing tonnage and when a train requires movement over more than one division's area

of responsibility, the maximum tonnage which can be moved would be the tonnage which can be moved over the most restrictive division.

b. Troop or other special trains will replace an equal number of tonnage trains; when operation of such trains is anticipated, the factor for train density must be so adjusted, with the resulting decrease in net railway division tonnage.

3-28. EQUIPMENT ESTIMATE. Planning data are based on use of standard US Transportation Corps

equipment. Allowances for use of indigenous or captured equipment should be based on data obtained by an evaluation of the many factors involved, such as availability of equipment, extent of expected destruction, condition of equipment, types and availability of local fuel, availability of repair parts, and types of coupling devices. Planning data are available in FM 55-15, TM 55-206, logistics surveys, special transportation studies based on intelligence reports, reports of government-owned railroads in peacetime, and articles appearing in such publications as Railway Gazette (British) and Railway Age (US).

a. Computation of requirements should be made for each railway division separately. The following data are recommended for general planning for the use of road locomotives:

- (1) Average rate of travel from division terminal to division terminal — 15 kilometers per hour.
- (2) Time in each division terminal for steam locomotives—8 hours. (Allows time for locomotive servicing, running repairs, and time lost between engine houses and yards.)
- (3) Time in each division terminal for diesel/electric locomotives — 3 hours.
- (4) Reserve engines, to allow for unforeseen circumstances such as operational peaks, heavy repairs, or destruction — 20 percent.

b. Switch-engine requirements at water and inland terminals and division terminals depend on the physical track layout and the number of cars to be handled at such points. The following may be used as a general guide only:

- (1) For water and inland terminals, one per 75 cars dispatched or received per day.
- (2) For division terminals, one per 150 cars passing per day. (Using these formulas, requirements are based on flat switching combination rail yards.)

c. Characteristics of US rolling stock are discussed in FM 55-15 and include the following:

(1) Freight requirements are computed separately for operations between major supply installations or areas on each line of communication (LOC) as follows:

$$\text{Daily Turnaround time} = \frac{\text{Tonnage Average}}{\text{tons per car}} \times \text{Number of cars}$$

Turnaround time is the total estimated number of days required for a car from the time it is placed for loading at its point of origin, moved to its destination, unloaded, and returned to its point of origin. Such time may be computed by allowing 2 days at origin, 1 day at destination, and 2 days transit time for each railway division (or major portion) that the cars must traverse. This method, rather than an actual hour basis, is used to incorporate delays due to terminal and way-station switching and in-transit rehandling of trains. Computations should be increased by 10 percent to meet operational peaks, commitments for certain classes of cars, and bad order cars. An average planning factor for net load per car may be assumed as follows:

Standard gauge to broad gauge	
US equipment	20 tons
Foreign equipment	10 tons
Narrow gauge	
US equipment	15 tons
Foreign equipment	7 1/2 tons

If utilizing commercial US rail equipment, 40 tons should be the load factor. Weight capacities are published in the Official Railway Equipment Register. Tank car requirements are computed separately, based on the bulk POL requirement and the computed turnaround time.

(2) Passenger car requirements vary depending on troop movement policies and rest and recuperation

policies. Theater passenger car requirements normally are fulfilled by acquisition of local equipment, with the exception of ambulance trains. A type of passenger train for long-distance moves consists of 7 day coaches, 14 sleeper cars, 1 kitchen or 2 diner cars, and 1 baggage car. Mixed trains which carry both personnel and freight (vehicles, artillery, and equipment) are authorized only for reasons of military necessity. They are, at times, desirable from a tactical and organizational standpoint. Such moves are not economical when passenger equipment is in short supply because mixed trains move at freight speed and equipment is not used fully.

3-29. OUTSIZED EQUIPMENT. Outsized equipment is that which, because of extreme dimensions (height, width, length), or extreme weight, or combinations thereof, requires special handling under restricted speeds or on special cars. The planner should recognize that more of this type of equipment is being designed; he should attempt to build a train of these outsized loads for a single movement rather than to place a few in each train moving on the LOC. The planner should immediately learn the height, width, and weight restrictions over the segment of track which his train will travel. Such movements require special meeting points on adjacent lines of a double track and retard returning traffic and trains following in the same direction.

3-30. FLATCAR REQUIREMENTS.

a. Flatcar requirements are based on maximum utilization of each car. Refer to tables in FM 55-15 to determine type and size of cars available for US or foreign rail services.

b. Maintaining unit integrity requires 10 percent more flatcars than those required for separate loading. Freight trains moving heavy equipment such as tanks, artillery, vehicles, and engineer equipment, seldom exceed 65 cars or 1,200 tons.

3-31. MOVEMENT OF TROOP UNITS ON FOREIGN RAILWAYS. Characteristics of foreign rolling stock are discussed in FM 55-15. Assumed

capacities of foreign railways are indicated in the following subparagraphs:

a. Freight cars.

Well flats (depressed center)	50 tons
Medium flatcars	25 tons
Small flatcars	12 tons
Boxcars	10 tons or 25 troops

Well flats are used to transport heavy items having great height in general freight service (foreign and domestic).

b. Passenger cars.

Coaches	40 troops
Sleeping cars	32 troops

In the forward coach areas, passenger equipment is seldom used for unit moves. The limited available equipment may be used for movement of casualties,

convalescent, and redeployment groups or for leave trains.

c. Trains.

Maximum length	40 cars
Maximum net load	400 tons
Maximum troops	1,000 (using boxcars)

3-32. MOVEMENT BY RAIL.

a. Unit moves by rail require the establishment of four forms. They are the unit loading inventory and checklist, the train loading plan, the train consist table, and the entraining table. Planning begins with unit preparation of the unit loading inventory and checklist. This form should be on file with the unit and kept current at all times. DA Form 2940-R is used for the inventory. Preparation of this form is described in FM 55-65. A sample is provided at Figure 3-4.

b. The train loading plan is prepared by the unit after it is provided with a list of rail equipment that will

be available for the move. The plan is prepared on DA Form 2942-R. A sample is provided at Figure 3-5. Preparation of this form is described in FM 55-65.

c. After the train loading plan is completed, a train consist table is prepared. The table will aid in planning and controlling the move, especially when more than one passenger or freight train is needed for one unit. Samples of freight and passenger train consist tables are provided at Figures 3-6 and 3-7, respectively. The tables reflect the units entrained, the number and type of rail equipment used, and the personnel having duty positions/functions during the move.

d. The final form that must be completed is the entraining table. The entraining table is a time schedule that shows the train number; military authorization identification number or military impedimenta route order number; order of departure; point, date, and hour of loading; date and hour of departure; date and hour of arrival; and the entraining officer for each train. An example of the entraining table is at Figure 3-8.

UNIT LOADING INVENTORY AND CHECKLIST (WORKSHEET)						
ORGANIZATION			STATION			
HHD 234th Trans Bn (TML)			Fort Eustis, Virginia			
TOE			DATE			
55-116			27 March 1985			
PACKAGE NO.	QUANTITY	DESCRIPTION	DIMENSIONS (L x W x H)	WEIGHT (LB)	CUBE (FEET)	SQUARE* (FEET)
Z001	1	Truck, utility, 1/2-ton M151	131.8x63.3x52.5	2,350	253.5	57.9
Z002	1	Truck, utility, 1/2-ton M151	131.8x63.3x52.5	2,350	253.5	57.9
Z003	1	Truck, utility, 1/2-ton M151	131.8x63.3x52.5	2,350	253.5	57.9
Z004	1	Truck, utility, 1/2-ton M151	131.8x63.3x52.5	2,350	253.5	57.9
Z005	1	Truck, utility, 1/2-ton M151	131.8x63.3x52.5	2,350	253.5	57.9
Z006	1	Truck, utility, 1/2-ton M151	131.8x63.3x52.5	2,350	253.5	57.9
Z007	1	Truck, utility, 1/2-ton M151	131.8x63.3x52.5	2,350	253.5	57.9
Z008	1	Truck, cargo, 3/4-ton M37B1	185.5x75.3x64.5	5,660	521.4	97.0
Z009	1	Truck, cargo, 3/4-ton W/WN M37B1	190x75.3x64.5	5,800	534.9	99.5
Z010	1	Truck, cargo, 2 1/2-ton M34	261 x 88 x 82	11,775	1091.2	159.6
Z011	1	Truck, cargo, 2 1/2-ton W/WN M34	274. x 88 x 82	12,186	1147.5	167.4
Z012	1	Trailer, 1/2-ton M116	108.5x61.5x44	580	169.9	46.3
Z013	1	Trailer, 1/2-ton M416	108.5x61.5x44	580	169.9	46.3
Z014	1	Trailer, 1/2-ton M416	108.5x61.5x44	580	169.9	46.3
Z015	1	Trailer, cargo, 3/4-ton M101	147x73.5x50	1,340	312.6	75.0
Z016	1	Trailer, cargo, 3/4-ton M101	147x73.5x50	1,340	312.6	75.0
Z017	1	Trailer, cargo, 1 1/2-ton M105	166x83x55	2,440	438.5	95.4
Z018	1	CONEX, organic equipment	102x75x82.5	8,375	365.0	NA
Z019	1	CONEX, organic equipment	102x75x82.5	8,375	365.0	NA
TOTALS						

*INCLUDE AMOUNT OF LOAD EXTENDING BEYOND VEHICLE DIMENSIONS.

DA FORM 2940-R, DEC 75

Figure 3-4. Unit Loading Inventory and Checklist

3-44

FM 101-10-1

UNIT TRAIN LOADING PLAN (WORKSHEET)													
Organization 234th Transportation Bn (Terminal)						Station Fort Eustis, Virginia				Date 27 March 1995			
TOE HHD TOE 55-116			Train No.			Main No.			Loading Time				
Type Car 50'F	Car No. 1		Type Car 50'F	Car No. 2		Type Car 50'F	Car No. 3		Type Car 50'F	Car No. 4			
Unit HHD			Unit HHD			Unit HHD			Unit HHD				
Z011 - 13,700 lb Z001 - 2,350 Z002 - 2,350 Z019 - 8,375 <u>Total 26,775 lb</u>			Z010 - 13,060 lb Z020 - 150 Z017 - 2,670 Z018 - 8,375 <u>Total 24,255 lb</u>			Z003 - 2,350 lb Z004 - 2,350 Z008 - 5,660 Z015 - 1,340 Z014 - 580 Z014 - 580 <u>Total 12,860 lb</u>			Z009 - 5,300 lb Z016 - 1,340 Z012 - 580 Z005 - 2,350 Z006 - 2,350 Z007 - 2,350 <u>Total 14,770</u>				
Type Car	Car No.		Type Car	Car No.		Type Car	Car No.		Type Car	Car No.			
Unit			Unit			Unit			Unit				
Remarks: Train number and loading time will be announced.													
<div style="font-size: 4em; opacity: 0.3; transform: rotate(-15deg); pointer-events: none;">SAMPLE</div>													
Passenger			Freight									Total	
Coach	Pullman		Baggage	Kitchen	Box	Gondola		Flat				Special	
	Sid	Tour				40'	50'	40'	42'	46'	50'		
											4		4

DA FORM 2942-R, AUG 68

Figure 3-5. Unit Train Loading Plan

3-45

FM 101-10-1

UNIT TRAIN LOADING PLAN (WORKSHEET)																																																												
Organization 234th Transportation Bn (Terminal)						Station Fort Eustis, Virginia			Date 27 March 1985																																																			
TOE 55-116 & 55-117		Train No.		Main No.		Loading Time																																																						
Type Car Baggage	Car No. 1	Type Car Sleeper	Car No. 2	Type Car Sleeper	Car No. 3	Type Car Sleeper	Car No. 4																																																					
Unit HHD & 161st		Unit HHD		Unit HHD		Unit 161st																																																						
		26		26		26																																																						
Type Car Sleeper	Car No. 5	Type Car Kitchen	Car No. 6	Type Car Sleeper	Car No. 7	Type Car Sleeper	Car No. 8																																																					
Unit		Unit		Unit		Unit																																																						
		26		26		26																																																						
Remarks:																																																												
<p>1 - Number of personnel per car appears in lower right corner of car block. In this block enter railroad company's last three digits of number of car assigned by the railroad when the information becomes available.</p> <p>2 - Car No. 1 is loaded with personal baggage.</p> <p>3 - Loading time, main number, and train number will be announced.</p>																																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Passenger</th> <th colspan="9">Freight</th> <th rowspan="4">Total</th> </tr> <tr> <th rowspan="3">Coach</th> <th colspan="2">Pullman</th> <th rowspan="3">Baggage</th> <th rowspan="3">Kitchen</th> <th rowspan="3">Box</th> <th colspan="2">Gondola</th> <th colspan="4">Flat</th> </tr> <tr> <th rowspan="2">Std</th> <th rowspan="2">Tour</th> <th rowspan="2">40'</th> <th rowspan="2">50'</th> <th rowspan="2">40'</th> <th rowspan="2">42'</th> <th rowspan="2">46'</th> <th rowspan="2">50'</th> <th rowspan="2">Special</th> </tr> <tr></tr> </thead> <tbody> <tr> <td></td> <td>6</td> <td></td> <td>1</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>8</td> </tr> </tbody> </table>													Passenger			Freight									Total	Coach	Pullman		Baggage	Kitchen	Box	Gondola		Flat				Std	Tour	40'	50'	40'	42'	46'	50'	Special		6		1	1									8
Passenger			Freight									Total																																																
Coach	Pullman		Baggage	Kitchen	Box	Gondola		Flat																																																				
	Std	Tour				40'	50'	40'	42'	46'	50'		Special																																															
	6		1	1									8																																															

DA FORM 2942-R, AUG 68

Figure 3-5. Unit Train Loading Plan — Continued

TRAIN CONSIST TABLE									
234th Transportation Battalion (Terminal) (Freight)									
Train No.	Transportation Grouping	Railway Equipment							Train Officers
		40' Gon-dolas	50' Gon-dolas	40' Flats	42' Flats	46' Flats	50' Flats	Total	
1	Hq & Hq Co	0	0	0	0	1	3	4	1LT Moore
	161st Trans Co (TS)	2	0	0	0	3	9	16	
	162d Trans Co (TS)	2	0	0	2	3	9	16	
	163d Trans Co (TS)	2	0	0	2	3	9	16	
	Total	6	0	0	6	10	30	52	

Figure 3-6. Freight Train Consist Table

TRAIN CONSIST TABLE							
234th Transportation Battalion (Terminal) (Passenger)							
Train No.	Transportation Groupings	Coach	Rail Equipment				Train Officers
			Pullman	Kitchen	Baggage	Total	
2	Hq & Hq Co		14	2	2	18	Train Commander CPT McDowell Mess - LT Story Surg - CPT Parker (MC)
	161st Trans Co (TS)						
3	162d Trans Co (TS)		11		1	14	Train Commander CPT Perry Mess - LT Barborak Surg - CPT Collins (MC)
4	163d Trans Co (TS)		11	2	1	14	Train Commander CPT Abercrombie Mess - LT Blackwell Surg - CPT Tally (MC)

Figure 3-7. Passenger Train Consist Table

ENTRAINING TABLE										
234th Transportation Battalion (Terminal)										
Train No.	MAIN or MI No.	Order Depart	Loading			Departure		Arrival		Entraining Officer
			Point	Date	Hour	Date	Hour	Date	Hour	
1	1234 A1	1	#1	20 Jun	0700	20 Jun	1900	25 Jun	1300	1LT O'Connor
2	12	2	#1	22 Jun	0800	22 Jun	0900	25 Jun	0400	1LT Ledwidge
3	13	3	#2	22 Jun		22 Jun	1000	25 Jun	0500	1LT Storey
4	14	4	#3	22 Jun		22 Jun	1100	25 Jun	0600	1LT Radford

Figure 3-8. Entraining Table

CHAPTER 4

PERSONNEL SERVICE SUPPORT

SECTION I. PLANNING CONSIDERATIONS

4-1. INTRODUCTION.

a. Personnel service support (PSS), one of the three functional areas of combat service support, is the management and execution of all personnel-related matters. Descriptions of personnel and administrative service support functions and systems are in FM 12-3-1, FM 12-3-2, FM 12-3-3, FM 12-3-4, and in user manuals for the Standard Installation/Division Personnel System (SIDPERS).

b. Personnel and administrative services are normally associated with adjutant general (AG) missions and organizations. These include morale/welfare and postal services as well as standard personnel and administrative support.

(1) Personnel services (including the three primary wartime subfunctions of numerical strength accounting, replacement operations, and by-name casualty reporting plus personnel management, personnel actions, and personnel records maintenance). SIDPERS is the standard, automated, integrated personnel system designed to provide personnel information system support at installation, division, brigade, battalion, and unit levels. The following are the four major functions of SIDPERS:

(a) Strength accounting. SIDPERS provides for numerical strength accounting of all Active Army personnel assigned or attached to organizations that have been designated for servicing by SIDPERS activities.

(b) Organizational and by-name personnel records keeping. SIDPERS provides for organizational and by-name personnel records keeping by the processing of local input transactions, change notices from higher headquarters, transfer data records from

horizontal and vertical personnel systems, and, as a byproduct, by processing of other SIDPERS files maintenance.

(c) Information exchange. Provision is made for exchange of both numerical and by-name information with other automated systems (such as the Active Army Personnel Reporting System, the Centralized Assignment Procedures III, the Unit Registration System, the Vertical — the Army Authorization Documents System, and the Trainee Accounting and Management System. Future plans call for an exchange of information with the Joint Uniform Military Pay System.

(d) Mobilization data. During mobilization, SIDPERS officially accesses Reserve Components personnel into the Active Army. Once entered, the data remain in SIDPERS until the individual departs Army service. At each installation that is assigned mobilization responsibility, the US Army Reserve Components Personnel and Administrative Center has pre-positioned Military Personnel Processing System Format Identification accession information on members assigned to Reserve Component (RC) units and to the Individual Ready Reserve Retirees, and to Individual Mobilization Augmentees. Additional information on SIDPERS and mobilization can be found in the MILPERCEN Personnel Manager's Mobilization Handbook.

(2) Administrative services (including classified document control, combat-related orders reproduction, and command post support).

(3) Morale/welfare support services. Table 4-1 is derived from data collected from World War I through the Vietnamese War. Approval authority for the Dis-

tinguished Service Cross and the Legion of Merit is normally restricted to echelons above division. The Bronze Star Medal includes awards for both heroism and achievement. The number of decorations awarded early in a hostile fire area is relatively low (except for Purple Hearts and Combat Badges), but this number increases the longer the unit remains in combat.

Table 4-1. Decoration Data (Based on the Needs of 10,000 Troops Per Month)

Decoration	Approximate Monthly Average Awarded
Distinguished Service Cross	5
Silver Star	100
Legion of Merit	10
Distinguished Flying Cross	20
Soldier's Medal	10
Bronze Star Medal	1000
Air Medal	500
Army Commendation Medal	1500
Purple Heart	500
Combat Infantryman Badge	1000
Combat Medical Badge	100

(4) Postal services. The Military Postal Service Agency (MPSA) is a jointly staffed Department of Defense (DOD) agency which has been established as the single manager for military postal matters. During peacetime, the MPSA uses commercial carriers to transport the bulk of military mail overseas. It must be assumed that the commercial lift capability will be adversely affected by future hostilities (for example, fuel shortages, inaccessible or destroyed civilian facilities, lift capability diverted to other uses), with the actual magnitude of the effect depending on the intensity of the conflict (high, mid, or low). In addition, it is ex-

pected that mail inbound to a hostile theater (especially a mid- to high-intensity theater) will suffer more adverse effects than outbound mail. The reason is that inbound transportation will likely be loaded to capacity with needed supply items, while outbound transportation will likely have the space available for mail transport. Based on guidance from the MPSA and historical experience, a baseline planning factor for mail has been developed. The factor is based on a high-intensity Pacific theater, with appropriate adjustments made for other conditions (see Table 4-2). The factor equals .16 pounds per man per day (official mail equals .10 lbs and personnel mail equals .06 lbs). The volume of personnel mail (.06 lbs per man per day) will be included in the next revision of the DOD Postal

Table 4-2. Mail Data — Wartime

TO THE THEATER	INTENSITY		
	HIGH	MEDIUM	LOW
EUROPEAN:			
AIR	.24	.36	.69
SURFACE	NA	NA	.27
TOTAL	.24	.36	.96
PACIFIC:			
AIR	.16	.24	.46
SURFACE	NA	NA	.18
TOTAL	.16	.24	.64

CONSIDERATIONS:

- Data are shown in lbs per man per day (that is, 2.4 lbs = total weight for one man for 10 days in a high-intensity European theater).
- Data are based on historical data (Vietnam and MPSA planning guidance).
- Historical data show that volume to the Pacific theater equals two-thirds of the European theater's volume.

Manual (DOD 4525.6-M) and will reflect present guidance regarding restrictions/embargoes on personal mail that would be in place upon implementation of an OPLAN which assumes high intensity combat. A conversion factor of 12 pounds per cubic foot has also been established for priority mail. Other classes of mail may have different figures; however, current policy guidance reflects that priority mail would make up the bulk of the mail volume.

Tables 4-3 and 4-4 reflect both historical data and estimates developed by the MPSA. These estimates should be used only as a planning guide. Each command must develop and maintain mail-related statistics to effectively manage the mail flow.

Table 4-3. Mail Data — Peacetime

TO THE THEATER	LBS	TONS (2000 lbs)
EUROPEAN		
AIR	19,156	9.578
Official Personnel	54,038	27.019
SURFACE		
Official Personnel	21,414	10.707
TOTAL	53,723	26.861
PACIFIC	148,331	74.166
AIR		
Official Personnel	26,069	13.034
SURFACE	76,462	38.231
Official Personnel	19,173	9.569
TOTAL	39,385	19.693
	161,053	80.527

CONSIDERATION:

- The table was developed using data from Vietnam, Germany (family members authorized), and Korea (family members not authorized) during FY 69.

4.2 FINANCE SERVICES. Finance support is provided on an area support basis, without regard to unit affiliation. Administrative and personnel, financial services support systems and organizations in a theater of operations (TO) use automatic data processing equipment (ADPE) to facilitate the provision of responsive support for management and other user requirements. Commanders and staffs use automatic data processing (ADP) summary reports and other printouts. When ADP support is not available, manual procedures will be used. Centralized and controlled personnel records keeping reduces administration and records keeping at unit level. A description of wartime finance support functions may be found in FM 14-6 and FM 14-7.

Table 4-4. Mail Data — Peacetime

TO THE CONUS	TONS (2000 lbs)	AIR	MOM	SAM	SURFACE
FROM					
European Theater	12,180.5	2,854.0	304.6	8,945.2	79.7
Pacific Theater	15,560.5	7,973.2	527.4	6,574.6	483.3

CONSIDERATIONS:

- Data represent FY 83.
- European theater data are with family members authorized (theater population: 501,710).
- Pacific theater data are with family members not authorized (theater population: 250,855).
- Wartime volume to CONUS would be similar to the above (unless family members were evacuated, causing a decline in proportion to the number evacuated).
- MOM—Military ordinary mail; SAM—Space available mail.

SECTION II. ENEMY PRISONERS OF WAR, TERRORISTS, AND ENEMY CIVILIAN INTERNEES

4-3. ENEMY PRISONERS OF WAR — CONVENTIONAL OPERATIONS.

a. In order that the required resources are available and the necessary arrangements are made for the reception, care, and disposition of enemy prisoners of war (EPW), an estimate for a given period of time for a special operation is required. Use the following factors:

- The number of EPW that will be captured.
- The number of enemy civilians that will be interned.
- The number of EPW that will be retained in the theater of operations (TO).

b. Average capture and evacuation rates for non-nuclear warfare have been developed and incorporated in this section. Planners should bear in mind that prisoners usually are not captured at a uniform rate and that the figures cited in this section represent averages which may be greatly altered by such influencing factors as —

- Enemy morale.
- Avenues of withdrawal open to enemy troops.

- Ability of friendly forces to encircle or to cut off enemy units.
- Mode of operation; that is, attack, defense, retrograde.

- Operational environment.
- Relative strength and sophistication of enemy forces.
- Intensity and effectiveness of ideological indoctrination of enemy troops.

- Intensity and effectiveness of friendly psychological operations.

c. Available experience factors regarding the internment and security of enemy civilians show that the number of interned in specific situations varies greatly. Planners using the civilian internee factors should modify them by such considerations as —

- Extent to which enemy civil authorities and agencies work with military forces.
- Intensity and effectiveness of ideological indoctrination of enemy officials and the general populace.

- Intensity and effectiveness of friendly psychological operations aimed at influencing the enemy civil populace.

- Extent to which the enemy populace supports the political and military goals of the enemy government.

The numbers in Table 4-5 appeared in the 1944 edition of FM 101-10 and they have not changed. Therefore, it

Table 4-5. Enemy Prisoners of War (EPW) Capture Rates (Per Month) — Equal Force Estimates

Troops (US)	Percentage of Enemy Strength
Infantry divisions	1.35
Infantry divisions (mechanized)	1.10
Armored divisions	0.80
Airborne divisions	0.65
Corps and field army nondivisional units:	
Armored cavalry regiments	0.85
Separate combat brigades:	
Infantry brigades	0.90
Infantry brigades (mechanized)	0.75
Armored brigades	0.55
Airborne brigades	0.45
Other units	Negligible

can be concluded that these numbers are derived exclusively from World War II data. Other factors were developed in 1961 and include Korean data. The mechanized division percentages are estimates derived from comparisons of other numbers.

For Tables 4-6 through 4-10, planning factors are based on the experience of German Forces on the Eastern Front in World War II during the period when they faced numerically superior forces. Until the Battle of Stalingrad in late 1942, the Germans were on the offensive. Following that battle and until the end of the war, the German posture was defensive. The force ratio was not constant. It increased to approximately 1:1.8 (German Forces to Russian Forces) by the fall of 1942 and to 1:2.5-3.5 (German Forces to Russian Forces) by the summer of 1944. Divisional German strength also varied from 15,000 to 8,000 soldiers during this period. Therefore, the factors are based on Division Equivalent Combat Troops and are expressed as the number of EPWs captured per combat soldier per day. The use of the term "combat soldier" does not limit the capture of enemy prisoners to the front. The factors also include prisoners taken in the rear battle on the many occasions when the Soviets penetrated deeply behind the German lines of defense. As with all such factors, care should be exercised to avoid development of unreasonable projections.

4-4. ENEMY PRISONERS OF WAR — STABILITY OPERATIONS.

Although the EPW capture rate for stability operations may be very low, failure of the enemy to wear a uniform or other recognizable insignia presents a problem of identification. Consequently, large numbers of civilian suspects may also be detained during operations. This requires subsequent individual interrogation screenings at brigade and division levels for all detained personnel to determine their true status and to make appropriate disposition. In the Vietnam operations, the ratio of EPW was about one for each six detainees taken into custody (Table 4-10).

Table 4-6. Enemy Prisoners of War (EPW) Capture Per Month Numerically Superior Forces (Forces Ratio — 2:1)

Force and Operation	Number
Division in attack of a defensive position	1,500
Division in attack of a defensive position, with complete surprise attained	2,100
Division in defense of a position against an unsuccessful enemy attack	9,000
Infantry division (mechanized) (or task force) in an encirclement operation	24,450
Armored division (or task force) in an encirclement operation	3,000

Table 4-8. Enemy Prisoners of War (EPW) Capture Rates — Theater Estimates

Unit	Enemy Capitulation			
	Defense (US)	Offense (US)	First Month	Succeeding Month
Infantry division	230	3,500	6,000	30,000
Infantry division (mechanized)	175	3,550	6,000	30,000
Armored division	117	3,600	6,000	30,000
Airborne division	155	2,550	6,000	30,000

Table 4-7. Daily Enemy Prisoners of War (EPW) — Numerically Inferior Forces

Posture	Number EPW Per Combat Soldier Per Day
Offensive	.00367
Defensive	.00035

Table 4-9. Enemy Prisoners of War (EPW) in an Active Theater

Purpose for Retention in Theater	Number Per Division
To provide a theater EPW labor pool	4,000
To provide to EPW housekeeping, administration, etc.	<u>2,666</u>
Total (division slice)	6,666

Table 4-10. Enemy Prisoners of War (EPW) Capture Data — Vietnam Conflict

Unit	Number of EPW Captured Per Year
Average per division over four years for all types of divisions and division equivalents	423
High year average per division (1967)	644
Low year average per division (1966)	213

4-5. TERRORISTS.

a. Terrorists are a fact of contemporary life. They are dedicated, intelligent, well-financed, resourceful, and astute planners. They are difficult to identify and are not easily captured or interned.

b. The worldwide use of terrorist tactics has increased significantly over the past 25 years, and this upward trend is not expected to abate in the foreseeable future. Besides during peacetime, acts of terrorism should also be expected in the event of armed conflict. US forces must therefore be prepared to engage in counterterrorist activities to assist the civil and military police. Current doctrine states that counterterrorist activities may involve the use of general purpose forces as well as those forces specifically organized and trained in counterterrorist techniques.

c. No data are available as to the number of specific incidents that can be expected within a given command over a given timeframe; however, additional information can be found in TC 19-16 and FM 100-37.

4-6. ENEMY CIVILIAN INTERNEES.

a. Department of the Army (DA) establishes broad policies (AR 633-51) for the internment of civilians presenting a security threat to allied forces. In certain limited field operations, such as against an unsophisticated enemy in an Internal Defense and Development (IDAD) environment, the number of civilians interned may exceed the number of enemy prisoners captured. When military operations result in the movement of large numbers of refugees, potential civilian internees are invariably among the refugees. While no dependable internment rates can be established, the general percentage factors may be used in preparing

estimates until such time as more specific guidance and information become available.

b. Factors applicable to the local static population include the following:

Civilian Population	Percentage of the Population Interned
Mainly hostile	0.1 to .05
Mainly friendly	0.05 to 0.1

c. Factors applicable to the estimated number of refugees (estimates derived from these factors are added to those developed from the application of the factors in subparagraph b):

Refugees	Percentage of Refugees Interned
Mainly hostile	2.0 to 5.0
Mainly friendly	0.1 to 1.5

SECTION III. MILITARY PRISONERS AND CRIME RATES

4-7. MILITARY PRISONERS.

a. Background. The confinement, care, employment, and disposition of US military prisoners are command responsibilities that planners must consider in preparing for the conduct and support of tactical operations. The factors and figures given below, with respect to nonnuclear conditions, are based on extensive statistical data derived from commands of various types and sizes in a wide range of operational environments and adjusted to reflect airland battle doctrine. The factors cited for nuclear conditions represent an increase based on the assumption that the employment of nuclear weapons will have an overall demoralizing effect which will increase crime and AWOL/desertion rates.

b. Average Confinement Rates.

Conditions	Percentage of Command Population
------------	----------------------------------

- (1) Nonnuclear 5
(2) Nuclear 1.0

See Influencing Factors (c) below.

c. Influencing Factors. The above rates reflect a reduction from peacetime factors for the following reasons.

- (1) The number of military prisoners is lower in a wartime theater than it is Armywide.

(2) AWOL/desertion rates (about 80% of military prisoners) are lower on foreign soil.

(3) Confinement rates are lower for regulars and reservists than for draftees.

(4) Confinement rates are lower for shorter duration scenarios.

d. Evacuation From the Theater of Operations and Retention Therein. The Department of Defense (DOD) or Department of Army (DA) establishes basic policies regarding the evacuation of US military prisoners from the theater. These policies may change depending on variations in both the strategic and tactical situations. Normally, US military prisoners who are not

restorable to duty, who have been sentenced to punitive discharge, or who have more than 6 months to serve are evacuated to the CONUS. Of all US military prisoners confined in the theater of operations, the following factors may be expected to apply under both nuclear and nonnuclear conditions when normal evacuation policies have been established.

Nuclear and Nonnuclear Conditions		Percentage
(1) Evacuated to CONUS disciplinary barracks.		34
(2) Retained in theater rehabilitation training centers.		30
(3) Retained in stockades in the theater.		36

4-8. CRIME RATES.

a. To make the necessary arrangements for the detection, investigation, and disposition of criminal incidents, it is necessary to prepare an advance estimate of the number of such incidents that will occur within the command over a given timeframe. A delineation between types of criminal incidents is also beneficial in determining the command's present-for-duty

strength, as crimes of a minor nature can usually be adjudicated in a more timely manner than crimes of a serious nature (for example, crimes of violence, desertion, drug trafficking). Experience indicates that the overall peacetime crime rate will not be drastically altered during a conflict; however, local conditions and the tactical situation must be considered when projecting crime rates. Military operations on urbanized terrain (MOUT) are more conducive to crimes against property than are jungle or desert operations. The location of military operations to the established drug-producing regions of the world is likely to affect the availability of illegal drugs within the command. The tactical situation will also have an effect because those soldiers engaged in maneuvers or actual combat will not be afforded the same opportunity to commit a given type of crime as will those soldiers who are not involved in maneuvers or combat.

b. Criminal investigators within a command fall into two categories: the Criminal Investigation Division (CID) and the Military Police Investigators (MPI). CID investigators generally handle crimes of a serious nature and the (MPI) handle crimes of a lesser nature

(misdemeanors, simple assaults, incidents declined by CID). Workloads between the two types of investigators differ due to the time element required to complete a given case. Incidents handled by MPI tend to be less time-consuming than those handled by CID; hence, the MPI caseload per investigator is higher than that per CID investigator. For planning purposes, a single MPI investigator is considered capable of handling up to 137 incidents per year. Average yearly caseloads for the CID investigator are not as readily defined; however, a good planning range is 30 to 40 cases per year per investigator.

c. The following tables provide a statistical data base that can be used to project six major types of criminal incidents. Data for all crime tables were provided by the Military Police Operations Agency.

Table 4-13. Crimes Against Property
(Rate Per 1000)

FY	WORLDWIDE ¹	CONUS	OVERSEAS
64	14.50	14.16	15.05
65	16.08	16.28	15.80
66	14.28	13.44	15.30
67	15.19	15.45	14.87
68	20.02	19.12	21.31
69	28.26	31.69	24.38
70	41.33	53.26	26.66
71	72.04	70.81	74.47
72	91.49	81.71	106.71
73	83.77	72.74	103.93
74	89.87	82.97	102.62
75	89.86	88.18	92.82
76	87.99	86.52	89.35
77	78.80	80.86	75.16
78	74.65	75.74	72.81
79	74.35	74.19	74.55
80	77.11	78.67	73.56
81	74.91	75.53	73.84
82	65.68	67.17	63.15
83	62.53	64.34	59.46

FOOTNOTE:

¹Worldwide rate takes into account the different strength levels between CONUS and overseas; hence, it cannot be derived by simply combining the CONUS and overseas rates.

Table 4-11. Marijuana Use and Possession
(Rate Per 1000)

FY	WORLDWIDE ¹	CONUS	OVERSEAS
72	9.88	7.73	13.05
73	17.87	15.96	21.32
74	29.38	25.48	36.45
75	32.02	28.76	38.02
76	29.21	28.58	30.34
77	29.91	31.03	27.88
78	28.11	28.32	27.76
79	27.97	28.98	26.36
80	25.47	27.08	22.93
81	30.83	30.12	31.99
82	26.40	22.93	32.26
83	17.42	15.95	19.92

FOOTNOTE:

¹Worldwide rate takes into account the different strength levels between CONUS and overseas; hence, it cannot be derived by simply combining the CONUS and overseas rates.

Table 4-12. Other Drug Offenses
(Rate Per 1000)

FY	WORLDWIDE ¹	CONUS	OVERSEAS
72	8.92	6.32	12.57
73	6.98	5.22	10.18
74	8.45	4.62	15.37
75	8.47	4.76	15.15
76	7.02	4.13	12.21
77	5.55	4.04	8.23
78	5.09	3.02	8.53
79	6.41	3.48	11.08
80	5.62	3.74	8.62
81	5.24	4.18	7.02
82	5.29	3.69	8.03
83	5.00	2.74	8.83

FOOTNOTE:

¹Worldwide rate takes into account the different strength levels between CONUS and overseas; hence, it cannot be derived by simply combining the CONUS and overseas rates.

Table 4-14. Crimes of Violence

(Rate Per 1000)

FY	WORLDWIDE ¹	CONUS	OVERSEAS
64	3.88	3.20	4.91
65	3.64	3.41	3.97
66	3.13	2.49	3.95
67	3.44	3.38	3.52
68	3.38	3.60	3.14
69	4.39	5.11	3.59
70	5.87	6.56	5.09
71	7.02	7.05	7.05
72	8.12	7.45	9.12
73	7.83	6.61	10.04
74	7.94	6.59	10.42
75	8.38	7.72	9.55
76	7.20	6.47	8.53
77	6.28	5.41	7.80
78	6.04	4.97	7.85
79	5.90	4.67	7.88
80	6.46	5.43	8.12
81	5.91	4.60	8.16
82	5.16	3.70	7.64
83	4.57	3.40	6.58

FOOTNOTE:

¹Worldwide rate takes into account the different strength levels between CONUS and overseas; hence, it cannot be derived by simply combining the CONUS and overseas rates.

Table 4-15. Absence Without Leave

(Rate Per 1000)

FY	WORLDWIDE ¹	CONUS	OVERSEAS
65	44.4	58.3	21.9
66	42.5	57.6	20.6
67	56.6	82.2	18.7
68	60.6	85.0	22.5
69	69.9	102.1	26.7
70	80.2	119.9	28.0
71	103.4	151.7	36.5
72	104.4	138.8	48.7
73	107.1	131.7	59.4
74	88.8	110.8	45.9
75	66.3	83.4	28.1
76	45.6	56.1	19.3
77	47.0	46.7	13.8
78	40.4	43.7	17.7
79	38.0	39.6	18.3
80	41.6	54.9	17.5
81	36.0	45.0	18.6
82	27.3	33.7	15.4
83	19.6	23.8	11.5

FOOTNOTE:

¹Worldwide rate takes into account the different strength levels between CONUS and overseas; hence, it cannot be derived by simply combining the CONUS and overseas rates. Rates do not reflect deserters; this eliminates doublecounting them with AWOLs.

Table 4-16. Deserters

(Rate per 1000)

FY	WORLDWIDE ¹	CONUS	OVERSEAS
65	15.7	23.1	3.4
66	14.7	22.5	4.0
67	21.4	33.0	4.6
68	29.1	46.6	5.0
69	42.4	70.7	5.0
70	52.3	88.2	5.4
71	73.5	121.7	7.9
72	62.0	95.6	9.8
73	52.1	71.6	14.6
74	41.1	55.7	13.4
75	26.0	34.0	7.0
76	15.4	19.7	4.1
77	16.7	16.4	3.7
78	15.4	16.8	4.0
79	18.1	19.8	4.9
80	19.6	27.0	6.7
81	15.9	20.5	6.2
82	11.0	13.7	5.0
83	7.1	8.9	3.8

FOOTNOTE:

¹Worldwide rate takes into account the different strength levels between CONUS and overseas; hence, it cannot be derived by simply combining the CONUS and overseas rates. Rates reflect deserters only; AWOLs are not included.

SECTION IV. PERSONNEL LOSSES, LOSS ESTIMATES, AND REPLACEMENTS**4-9. PERSONNEL LOSSES.**

a. A personnel loss is any reduction in the assigned strength of a unit. Such loss is caused primarily by enemy action, disease, accidents, and administrative action. The rate of loss varies with the TO, climate, terrain, the condition and state of training of troops, type of activity, the enemy, and numerous other factors. Each division and corps has its own loss experience depending on its own situation. Loss rates by arm or service and by military occupational specialty (MOS) within corps and divisions vary with the ex-

posure of the particular category of personnel to the various causes of losses. Personnel losses are recorded in three general categories: battle, nonbattle, and administrative.

(1) Battle losses, which are those incurred in action, including —

(a) Wounded or injured in action, to include those who died of wounds and died of injuries received in action.

(b) Killed in action.

(c) Missing in action or captured by the enemy.

(2) Nonbattle losses, which are those not directly attributable to action regardless of when sustained, including —

(a) Nonbattle dead.

(b) Nonbattle accident/injury.

- (c) Nonbattle missing.
- (d) Illness/disease.

(3) Administrative losses, which are those resulting from —

- (a) Transfer from the unit.
- (b) Absence without leave.
- (c) Desertion.
- (d) Personnel rotation.
- (e) Discharges.

b. In addition to soldiers killed, captured, or missing, gross losses include personnel evacuated to hospitals and dropped from the rolls of their units. In all units in the theater army, any soldier hospitalized or evacuated to a hospital in the COMMZ is dropped from unit rolls and carried on the rolls of theater training, transient, and patient strength, which is not chargeable against the authorized theater strength.

c. Net losses are gross losses minus personnel returned to duty within theater. Net losses are computed only at theater level and are used as a basis for estimates of personnel replacements required from the CONUS to maintain theater strength.

d. The data that appear in the tables of this section are based on both experience (World War II and Korean War) and on projections (see paragraph 4-11h for appropriate projection parameters). The tables should not be viewed as directly applicable to any future conflict, but as a basis from which planning can begin. Each conflict will have its unique characteristics and, as such, will require that each echelon of command compile loss statistics. The longer the conflict progresses, the more comprehensive the statistical base will become. Accurate estimates of losses should, therefore, improve over time as the unique aspects of the conflict become readily apparent. Since administrative losses are based on policies which are subject

to change over time, they are not readily adaptable to presentation in tabular form. Therefore, tables on administrative losses, other than confinement, are not included in this manual.

(1) Since the disease rate is a large part of the nonbattle loss rate, the overall loss rate has seasonal variations and depends on the region where the force is operating. Generally, disease losses can be expected to exceed battle losses over an extended period by as much as 3 to 1. On occasion, the ratio may reach 6 to 1 or greater. The majority of disease cases are not hospital admissions and, therefore, do not contribute to statistics. For example, approximately 10 persons per 1,000 will attend dental clinics daily; they will be noneffective for a portion of that day, but they will not be reflected in daily admission rates. However, these disease losses do represent a form of noneffectiveness, since they can markedly decrease the ability of an individual or a unit to perform a mission.

(2) One factor that can influence administrative losses is the family. Today, over 50 percent of the Active Army force are married (over 80 percent of the officers, 78 percent of the career enlisted, and 28 percent of first-term enlistees). Any armed conflict or potential conflict situation will obviously serve to increase the level of stress felt by individual soldiers. Similarly, concern over family welfare and safety will serve to heighten the existing stress level and could adversely impact on unit strength (through AWOLs, desertions, concern for the family). However, heightened stress levels can also be caused by any prolonged separation or absence (for example, extended PTXs, REFORGER, long periods of TDY, or annual training at locales which are displaced from the normal duty station, such as at Grafenwoehr and the National Training Center at Fort Irwin, California) between the soldier and the family. Concern for family welfare and safety, therefore, applies to units within CONUS as well as to those deployed overseas. If the soldier feels that the family will be provided for during periods of separation, the level of stress on that soldier can be significantly reduced. In addition to providing for the physical needs of the family, accurate and timely information should also be provided to the family as a mat-

ter of routine. Further information concerning family-related matters can be found in FM 26-2, Miscellaneous Publication 4-2, and Miscellaneous Publication 4-3.

4-10. NUCLEAR, BIOLOGICAL, AND CHEMICAL LOSS ESTIMATES.

a. The enemy's use of nuclear, biological, and chemical (NBC) weapons against US forces results in increased battle losses. Battle losses from nuclear weapons may be divided into the following two general categories:

(1) Battle losses sustained when a military unit is destroyed. Such losses are so great that individual replacement is not feasible. These battle losses are replaced by unit replacement.

(2) Battle losses sustained when units are on the periphery of the area of damage. Replacements for battle losses in this category come from survivors of destroyed units and from personnel in the individual replacement system.

b. No valid experience data exist from which loss experience tables can be compiled. The problem of estimating the number of replacements (both unit and individual) required to replace losses to NBC weapons involves many variable factors. Among the more important of these factors are —

- (1) Frequency of enemy employment of NBC weapons.
- (2) Types of yields of weapons employed.
- (3) Types of targets selected for NBC weapon attack.
- (4) Effectiveness of enemy target location system.
- (5) Accuracy of enemy delivery means.
- (6) Protective measures adopted by own forces.
- (7) Warning and reporting measures adopted by own forces.

c. Effective battle loss estimation requires an aggressive effort on the part of all agencies, particularly intelligence agencies, to provide specific data, the variable factors outlined in the preceding paragraph, or to permit reasonable assumptions concerning these variable factors. The validity of battle loss estimation is directly proportional to the degree of refinement that can be made in these factors.

4-11. COMBAT ZONE LOSS ESTIMATES.

a. The following procedures and data apply to the estimation of nonnuclear losses. Because of the possibility of nuclear battle losses and the effect that such losses may have on tactical operations, nuclear battle losses are estimated separately.

b. Tables 4-17 through 4-26 address the problem of loss estimation based on historical data generated through experience (primarily from World War I and the Korean Conflict).

c. Personnel loss estimates at corps and division are used to project the effect of losses on the tactical plan and on the handling and distribution of replacements in the commands. The estimates indicate the strength at any given time, the losses anticipated for a specific situation or period, and the distribution of these losses by arm or service and MOS. Combat estimates are of two types — short period (five days or less) and long period (five or more days). Estimates are used as a basis for allocation of available replacements to inform higher headquarters of anticipated replacement requirements. Corps headquarters use both short period and long period estimates. Divisions normally use only short period estimates.

d. In calculating losses, the following two major factors are considered:

(1) Loss rates applicable to the specific situation are expressed as percentage of strength or as number per thousand of average strength for any given period.

of. In compilation and use of loss data, units whose loss rates are about the same because of similar operating conditions are grouped together.

(2) Loss rates are applied to the strength of the particular command under consideration. The following two different strengths are used:

(a) Authorized strength is TOE strength plus additional personnel authorized by higher headquarters. Authorized strength is used in long-range planning and in cases of unknown or rapidly fluctuating assigned strength.

(b) Assigned strength includes all personnel carried as assigned to the unit. Assigned strength is used, when known, in long period estimates if it differs materially from authorized strength and if it will remain reasonably stable during the estimated period.

e. Short period estimates include the following:

(1) Tables 4-17 and 4-18 provide percentages by type of action, type of unit, battle loss or nonbattle loss, and branch. Table 4-17 shows an example of the distribution of infantry battle losses by selected MOS within an infantry division. Personnel losses of maneuver battalions most seriously affect the combat effectiveness of an infantry division. Historically, a total of 87.4 percent of the infantry battle losses occurs among riflemen and weapon crewmen (and closely allied specialists), who constitute the larger portion of the infantry division's assault battalions' strength. In stability operations, maneuver battalions may experience a substantial increase in the loss rate among noncommissioned officers. Table 4-18 is not used for loss estimates for a period greater than five days.

(2) Distribution of nonbattle losses in each branch is in the same proportion to the total nonbattle losses as the strength of that branch is to the total strength of the unit.

(3) For example, calculate the total nonnuclear losses of an infantry division in contact in the first three days of the defense of a position, and determine the number of infantry riflemen and weapon crewmen who become battle losses. Compute as follows:

(a) Total losses.

Authorized strength of division	17,423
Assigned strength of division (assumed), beginning of first day	15,341
Losses, first day, defense of position (2.2 percent \times 15,341 (Table 4-18, line 9, column 4))	338
Assigned strength, end of first day	15,003
Losses, second day, defense of position (1.3 percent \times 15,003 (Table 4-18, line 10, column 4))	195
Assigned strength, end of second day	14,808
Losses, third day, defense of position (1.3 percent \times 14,808 (Table 4-17, line 10, column 4))	193
Assigned strength, end of third day	14,615
Total losses, 3 days (338 + 195 + 193)	726

(b) Battle losses.

First day, defense of position (1.9 percent \times 15,341 (Table 4-18, line 9, column 2))	291
Second day, defense of position (1.0 percent \times 15,003 (Table 4-18, line 10, column 2))	150
Third day, defense of position (1.0 percent \times 14,808 (Table 4-18, line 10, column 2))	148
Total battle losses	589

(c) Infantry battle losses.

Infantry battle losses (93.0 percent \times 589 (Table 4-17, line 2, column 2))	548
Infantry riflemen and weapon crewmen battle losses (87.4 percent, paragraph e(1) \times 548))	479

**Table 4-17. Distribution of Battle Losses
by Branch (Divisions)**

1	2	3	4
Branch	Infantry Division (percentage)	Armored Division (percentage)	Airborne Division (percentage)
1			
2	93.0	62.0	85.6
3	2.4	3.6	6.9
4	2.0	23.1	0.0
5	1.5	3.3	3.9
6	1.1	8.0	3.6

Table 4-18. Daily Personnel Losses as Percentage of Strength

1	2	3	4	5	6	7	8	9	10
General Type of Operation for the Force as a Whole	Division in Contact	Nonbattle Loss	Total	Divisions in Corps and Reserve	Nonbattle Loss	Total	Nondivision Units, Corps ¹	Nonbattle Loss	Total
	Battle Loss (percentage)	(percentage)	(percentage)	Battle Loss (percentage)	(percentage)	(percentage)	Battle Loss (percentage)	(percentage)	(percentage)
1									
2	0.9	0.3	1.2	0.3	0.3	0.6	0.3	0.1	0.4
3	2.4	0.3	2.7	0.3	0.3	0.6	0.4	0.1	0.5
4	3.8	0.3	4.1	0.4	0.3	0.7	0.5	0.1	0.6
5	1.9	0.3	2.2	0.3	0.3	0.6	0.4	0.1	0.5
6	6.3	0.3	6.6	0.5	0.3	0.8	0.7	0.1	0.8
7	3.2	0.3	3.5	0.4	0.3	0.7	0.5	0.1	0.6
8									
9	1.5	0.3	1.8	0.3	0.3	0.6	0.3	0.1	0.4
10	1.9	0.3	2.2	0.3	0.3	0.6	0.4	0.1	0.5
11	1.0	0.3	1.3	0.3	0.3	0.6	0.3	0.1	0.4
12	3.2	0.3	3.5	0.4	0.3	0.7	0.5	0.1	0.6
13	1.6	0.3	1.9	0.3	0.3	0.6	0.4	0.1	0.5
14	0.7	0.3	1.0	0.3	0.3	0.6	0.3	0.1	0.4
15	1.3	0.3	1.6	0.3	0.3	0.6	0.3	0.1	0.4
16	0.7	0.3	1.0	0.3	0.3	0.6	0.3	0.1	0.4

FOOTNOTES

¹Use divisional loss rates for units attached to a division.

²Forces in contact — neither side attacking.

f. Long period estimates — combat zone include the following:

(1) Tables 4-19 and 4-20 provide percentages of monthly personnel losses for periods in excess of 5 days for the Korean War and World War II, respectively.

(2) Table 4-21 contains percentages for types of battle losses. Table 4-22 contains percentages for losses by branch within corps and larger units. For distribution of losses by branch within divisions, Table 4-17 applies. For distribution of nonbattle losses, refer to paragraph e(3).

REMARK:

The World War II percentage figures are the field battle loss distribution as reported through data processing unit channels, European Theater of Operations, for the period 6 June 1944 through 31 March 1945. The figure for armor combines the percentage originally reported as armored forces (2.9 percent), tank destroyer (1.4 percent), and cavalry (2.3

percent). In actual operations, the distribution of battle losses by branch varies with the composition of the force and type of operation.

(3) For example, calculate the number of replacements required to bring 1st Corps to authorized strength and to maintain it at that strength in combat for 15 days, assuming no nuclear losses. Compute as follows:

Unit	Authorized Strength	Assigned Strength
Three infantry divisions	52,419	44,780
One armored division	18,057	15,604
Corps nondivisional troops	46,101	38,322
Total corps	116,577	98,706

(a) Replacements needed now.

Authorized (116,577) — assigned (98,706) = 17,871

(b) Estimated losses, 15 days.

Infantry divisions (Table 4-20, line 2):

Battle losses ($1/2 \times 10.0$ percent $\times 52,419$) 2,621

Nonbattle losses ($1/2 \times 8.0$ percent $\times 52,419$) 2,097

Armored division (Table 4-20, line 3):

Battle losses ($1/2 \times 8.0$ percent $\times 18,057$) 722

Nonbattle losses ($1/2 \times 7.0$ percent $\times 18,057$) 632

Corps nondivisional troops (Table 4-20, line 4):

Battle losses ($1/2 \times 1.25$ percent $\times 46,101$) 288

Nonbattle losses ($1/2 \times 3.0$ percent $\times 46,101$) 692

Total losses for 15 days 7,052

(c) Total replacements required.

Replacements needed now 17,871

Losses for 15-day period 7,052

Total 24,923

Table 4-19. Personnel Losses (Korean War)¹

1	Type of operation	Infantry Divisions			Status Distribution (percentage)		
		Battle losses per division per day²	Battle losses per division (percentage per month²)	Killed	Wounded	Missing	
Offensive:							
2	Against main enemy force	67	11.2	14.6	83.2	2.3	
3	Against delaying force	26	4.3	18.2	69.2	12.2	
4	Organized	12	2.0	18.8	75.9	5.3	
5	Party disorganized	34	5.7	17.5	79.4	3.1	
Against fortified hill positions							
Defensive:							
6	Against main enemy force	77	12.8	25.2	68.8	6.2	
7	Main pressure on non-US units	35	5.8	16.1	70.6	13.2	
8	Withdrawal	119	19.8	15.2	44.5	40.2	
9	Positional warfare	6	1.0	18.6	75.0	6.4	

FOOTNOTES:

¹Based on experience 25 June 1950 to 25 July 1953.

²Based on assumed average divisional strength of 18,000.

Table 4-20. Personnel Losses (World War II)

(All Theaters)			
1	2	3	
	Battle Losses	Nonbattle Losses	
	(percentage per month)	(percentage per month)	
1			
2	10.00	8.0	
3	8.00	7.0	
4	1.25	3.0	

Table 4-21. Types of Battle Losses as Percentage of Total Battle Losses

Battle Losses	Infantry Divisions	Armored Divisions	Corps and Nondivisional Units
	(percentage)	(percentage)	(percentage)
Killed	16.5	18.0	16.0
Wounded	70.0	72.0	84.0
Captured and missing	13.5	10.0	Negligible

Table 4-22. Distribution of Battle Losses by Branch Within Corps and Larger Units in the Combat Zone as Percentage of Total Battle Losses

Branch	Percentage	
	World War II	Korean War
Infantry	81+	81.1
Artillery	4.5	
Field	(3.6)	5.7
Air Defense	(0.9)	
Armor	6.6	5.3
Corps of Engineers	3.2	
Army Medical		
Service	2.8	
Signal Corps	0.2	
Quartermaster Corps	0.1	
Ordnance Corps	0.2	7.9
Transportation		
Corps		
Chemical Corps	0.3	
Military Police Corps	0.1	
Miscellaneous	0.1	

g. Special estimates for airborne operations include the following:

(1) Personnel losses for forces conducting an airborne assault operation may be established by applying the applicable daily loss rates from Table 4-23 to the assigned strength of units actually committed to the operation. Rates in this table are for planning purposes only. The rates for each airborne operation differ. The rates in this table are useful as a guide only or for use in practicing estimate procedures.

(2) For example, calculate the number of non-nuclear losses that will be sustained by the 102d Airborne Division on D-day and D+1. Takeoff times and H-hour are on D-day. Computations for follow-up echelon are omitted from this example. Strength of the division (13,484) is echeloned as follows:

Unit	Strength
Assault echelon	11,571
Follow-up echelon	686
Rear echelon	1,045

Airhead — first day (Table 4-23, line 2, column 4):
 Assault echelon (11,571 × 9.6 percent) 1,111
 Airhead — second day (Table 4-23, line 2, column 7):
 Assault echelon (11,571 – 1,111) × 2.3 percent 241
 Total losses D-day and D+1 1,352

Table 4-23. Special Estimates for Airborne Operations

1	2	3	4	5	6	7
Type of operation and type of forces committed	First day (includes enroute and in airhead) (percentage)			Succeeding day (percentage) ¹		
	Nonbattle loss	Battle loss	Total	Nonbattle loss	Battle loss	Total
Airborne assault operation:						
Airborne or infantry division and attached troops:						
2 Assault echelon (parachute and/or assault aircraft ²)	0.3	9.3	9.6	0.3	2	2.3
3 Follow-up echelon	0.3	2.5	2.8	0.3	2	2.3
4 Corps troops	0.3	1.5	1.8	0.3	1	1.3
Air-landed operation (inside secured airhead):						
5 Airborne or infantry division and attached troops (to include replacements committed to combat upon arrival) ³	0.3	4.3	4.6	0.3	2	2.3
6 Corps troops	0.3	1.5	1.8	0.3	1	1.3

FOOTNOTES:

¹Upon linkup or when forces in the objectives area are firmly established, rates and methods given in subparagraphs d or e for an infantry division are applicable.

²For planning purposes and in the absence of experience factors, casualty figures for air-landed assault forces are assumed to be the same as for parachute assault forces.

³If not committed to combat, assess losses as for corps troops.

h. Special estimates for amphibious operations include the following:

(1) Nonnuclear personnel losses for amphibious forces establishing a beachhead may be estimated by applying the applicable daily loss rates from Table 4-24 to the assigned strength of units actually committed in the beachhead or en route. Rates in this table are for planning purposes only. The rates for each amphibious operation differ. The rates in this table are for use as a guide only or for use in practicing estimate procedures.

(2) The amount and the type of reinforcement required by divisions making amphibious landings differ for each operation because the force must organize to fit the mission, the area of operations, the lift available, and the enemy situation.

(3) For example, calculate the total of nonnuclear losses that will be sustained during an amphibious operation by 1st Corps on D-1, D-day, and D+1. Computations are tabulated in Table 4-25.

Unit	Assigned Strength
1st infantry division	15,606
2d infantry division	15,606
3d infantry division	15,606
Nondivisional troops, assault echelon	22,632
Nondivisional troops, follow-up echelon	36,415
Total 1st Corps	105,865

1st Corps will sail at assigned strength. On D-day, the 1st and 2d Infantry Divisions will assault the beach in a helicopter and waterborne assault. The 3d Infantry Division and nondivisional troops in the follow-up echelon will land on D+1.

(a) D-1 (losses at sea):

1. Assault divisions.	
31,212 × 0.5 percent (Table 4-24, line 2, column 2)	156
2. Nondivisional assault troops.	
22,632 × 0.5 percent (Table 4-24, line 3, column 2)	113

3. Follow-up division.

15,606 × 0.5 percent (Table 4-24, line 4, column 2) 78

4. Nondivisional follow-up troops.

36,415 × 0.5 percent (Table 4-24, line 5, column 2) 182

5. Total 1st Corps D-1 losses.

1 + 2 + 3 + 4 529

(b) D-day:

1. Assault landings.

a. Assault divisions.

(31,212 - 56) × 1.3 percent (Table 4-24, line 2, column 3) 404

b. Nondivisional assault troops.

(22,632 - 113) × 1.0 percent (Table 4-24, line 3, column 3) 225

2. Nonbattle losses.

a. Assault divisions.

(31,212 - 156 - 404) × 0.3 percent (Table 4-24, line 2, column 4) 92

b. Nondivisional assault troops.

(22,632 - 113 - 225) × 0.3 percent (Table 4-24, line 3, column 4) 67

3. Battle losses (forces in beachhead).

a. Assault divisions.

(31,212 - 156 - 404) × 5.3 percent (Table 4-24, line 2, column 5) 1,625

b. Nondivisional assault troops.

(22,632 - 113 - 225) × 3.0 percent (Table 4-24, line 3, column 5) 669

4. Losses at sea.

a. Follow-up division.

(15,606 - 78) × 0.5 percent (Table 4-24, line 4, column 2) 78

b. Nondivisional follow-up troops.

(36,415 - 182) × 0.5 percent (Table 4-24, line 5, column 2) 181

5. Total 1st Corps D-day losses.

1 + 2 + 3 + 4 3,241

(c) D+1:

1. Landing losses.

(a) Follow-up divisions.

(15,606 - 78 - 78) × 0.5 percent (Table 4-24, line 4, column 3) 77

(b) Nondivisional follow-up troops.

(36,415 - 182 - 181) × 0.5 percent (Table 4-24, line 5, column 3) 180

2. Beachhead losses.

(a) Assault divisions.

(31,212 - 156 - 404 - 92 - 1,625) × 1.8 percent (Table 4-24, line 4, column 9) 521

(b) Nondivisional assault troops.

(22,632 - 113 - 225 - 67 - 669) × 1.3 percent (Table 4-24, line 3, column 9) 280

(c) Follow-up division.

(15,606 - 78 - 78 - 77) × 1.8 percent (Table 4-24, line 4, column 9) 277

(d) Nondivisional follow-up troops.

(36,415 - 182 = 180) × 1.3 percent (Table 4-24, line 5, column 9) 469

3. Total 1st Corps D + 1 losses.

1 + 2 1,804

Table 4-24. Special Estimates for Amphibious Operations

1 Force	2	3	4	5	6	7	8	9
	Phase I. Forces enroute Daily at sea ¹	Landing		First day	Phase II. Forces in beachhead		Succeeding days ²	
	Nonbattle and battle loss (percentage)	Battle loss (percentage)	Nonbattle loss (percentage)	Battle loss (percentage)	Total (percentage) ³	Nonbattle loss (percentage)	Battle loss (percentage)	Total (percentage)
2 Assault forces ⁴								
2 Divisions and attached troops	0.5	1.3	0.3	5.3	5.6	0.3	1.5	1.8
3 Corps troops	0.5	1.0	0.3	3.0	3.3	0.3	1.0	1.3
Followup forces ⁵								
4 Divisions and attached troops	0.5	0.5	—	—	—	0.3	1.5	1.8
5 Corps troops	0.5	0.5	—	—	—	0.3	1.0	1.3

FOOTNOTES:

¹Rates in this column include both battle and nonbattle losses enroute and are distributed by arm or service in the same proportion to the total losses as the strength of each arm or service is to the strength of the total force being transported.

²After beachhead is secure and forces are building up for the breakout (phase III), the rates and methods given in Table 4-10 or Tables 4-17 and 4-20 apply. The rates in these tables apply only until the beachhead is firmly established.

³Losses are distributed as given in subparagraph d(3) for nonbattle losses; Table 4-18 or Table 4-21 for battle losses by arm or service; and Table 4-21 for battle losses by category (killed, wounded, captured, and missing).

⁴Assault forces in this table are those units who make their landing in the face of enemy opposition at or near the beachhead. For purposes of computing total division rates, the assumption is that an assault division lands one brigade by helicopter behind the beaches and one brigade over the beaches, followed by the reserve brigade and the remainder of the division.

⁵Follow-up forces in this table include those landing over beaches secured by other friendly forces.

Table 4-25. Worksheet Form — Personnel Loss Estimates for Amphibious Operations

1	2	3	4	5	6	7	8	9	10
F	R	D-1	L	R	D-day	L		D+1	
Forces	Rate (percentage)	Strength	Losses	Rate (percentage)	Strength	Losses	Rate (percentage)	Strength	Losses
Phase I—force at sea:									
2 Assault divisions	0.5	31,212	156						
3 Nondivisional assault troops	0.5	22,632	113						
4 Follow-up division	0.5	15,606	78	0.5	15,528	78			
5 Nondivisional follow-up troops	0.5	36,415	182	0.5	36,233	181			
Landing:									
6 Assault divisions				1.3	31,056	404			
7 Nondivisional assault troops				1.0	22,519	225			
8 Follow-up division							0.5	15,450	77
9 Nondivisional follow-up troops							0.5	36,032	180
10 Total — phase I			529			888			257
Phase II—forces in beachhead:									
Assault divisions:									
11 Nonbattle losses				0.3	30,652	92	1.8	28,936	521
12 Battle losses				5.3	30,652	1,624			
Nondivisional assault troops:									
13 Nonbattle losses				0.3	22,294	67	1.3	21,558	280
14 Battle losses				3.0	22,294	669	1.8	15,373	277
15 Follow-up division							1.3	35,872	489
16 Nondivisional follow-up troops									
17 Total — phase II						3,340			1,804

4-12. COMMUNICATIONS ZONE LOSS ESTIMATES.

a. In the past, the estimated nonnuclear battle losses for all ground troops in the COMMZ were considered negligible. Nonbattle losses were estimated to be 0.5 percent per month. The nonbattle loss estimate is still valid; however, battle losses can no longer be considered negligible. The range, sophistication, and lethality of enemy weapons systems is such that COMMZ battle losses, possibly sizable, are a definite reality. Historical data for appropriate loss rates do not exist (due primarily to US air superiority in past conflicts) and must therefore be compiled by each command.

b. Before a planner can estimate losses to nuclear weapons, he needs certain information on enemy capabilities (paragraph 4-10). If he cannot obtain specific information, he makes assumptions. By applying target analysis methods to selected critical target areas, he can evolve a basis for estimating nuclear losses.

4-13. THEATER-LEVEL NONNUCLEAR LOSS ESTIMATES.

a. The wide range of nonnuclear loss rates pertinent to potential US Army areas of operation makes infeasible the presentation of a single set of loss factors for worldwide application. Table 4-26 illustrates what can be done in formulating a theater-level estimating tool using the hospital admission rates shown in Chapter 5. Table 4-26 is designed for rough, quick estimates only and not as a substitute for factors carefully chosen to fit the specific assumptions and conditions of a particular operation plan. Nonbattle dead and missing are considered negligible for purposes of this estimate.

b. Losses may be estimated by —

(1) Determining battle casualty and nonbattle casualty losses of combat zone troops (Tables 4-17 and 4-18):

(a) Divisional.

(b) Nondivisional.

(2) Determining nonbattle accident/injury losses for troops in the COMMZ (Table 4-26).

(3) Adding (1) and (2).

4-14. REPLACEMENTS.

a. Soldiers not assigned to a unit at the time of mobilization may be used in several ways; however, the majority are normally used as replacements for personnel losses in units. The sources of filler and replacement personnel (Active Component, ARNG, USAR, IRR, retirees, and volunteers) and their disposition upon mobilization are discussed in FM 12-16.

b. Table of organization and equipment (TOE) units (both Active and Reserve Components) are deployed under the direction of DOD, the Joint Chiefs of Staff, and the Deputy Chief of Staff for Operations, DA, in conjunction with the United States Army Forces Command (FORSCOM) commander. They are programmed for movement by the Time-Phased Force Deployment Data (TPFDD). Early deploying units may have prepositioning materiel configured to unit sets (POMCUS) that they draw after arrival in country. Later deploying units (with the exception of some units with identified POMCUS) normally deploy with their equipment from their CONUS mobilization station. Upon arrival, they are met at the port(s) of embarkation by processing teams from their major headquarters. They either draw POMCUS stocks or off-load their equipment and move to their designated area. FM 12-16 discusses unit replacement operations.

Table 4-26. Theater Losses

Types of Losses	Gross Loss	Net losses (by evacuation policy)						
		15 days	30 days	60 days	90 days	120 days	150 days	180 days
Sick/disease and nonbattle accident/injuries	1.62	0.61	0.28	0.15	0.11	0.08	0.05	0.05
Battle casualties	0.78	0.69	0.60	0.47	0.41	0.37	0.35	0.33
Killed	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
Wounded/injured in action	(0.55)	(0.46)	(0.24)	(0.24)	(0.18)	(0.14)	(0.12)	(0.10)
Captured and missing in action	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)

CONSIDERATION:

• Factors expressed as number per 1,000 strength per day.

CHAPTER 5

HEALTH SERVICE SUPPORT PLANNING FOR EVACUATION AND HOSPITALIZATION

SECTION I. PLANNING CONSIDERATIONS

5-1. INTRODUCTION. This chapter provides planning data for the following:

- Battle casualty rates.
- Medical evacuation policy.
- Medical transportation.
- Calculations for patient evacuation requirements.
- Patient admission rates.
- Accumulation and disposition factors for total hospitalization system.

In any future conflict the threat of nuclear, biological, and chemical (NBC) directed energy warfare with its resultant mass destruction may be continuous. Lack of experience with NBC and directed energy warfare allows only for speculation of possible patient admission rates. Until these weapons are used and data are collected, however, the experience factors derived from past wars will be helpful in formulating plans for health service support (HSS). To plan effectively, the HSS planner must know the basic principles and definitions for battle casualty, disease, injury, and patient reporting.

5-2. BATTLE CASUALTIES.

a. A battle casualty is any person lost to his organization because he is killed, wounded, missing, captured, or interned if such loss is incurred in action. In action characterizes the casualty status as having been —

- The direct result of hostile action.
- Sustained in combat and related thereto.
- Sustained while going to or returning from a combat mission if the occurrence was directly related to hostile action.

b. Injuries due to the elements or self-inflicted wounds are not considered to have been sustained in action; therefore, they are not reported as battle casualties. Battle casualties include those wounded in action (WIA). This term describes all battle casualties who have incurred a trauma or injury due to an external agent or cause. The term covers all wounds and other injuries incurred in action such as piercing (penetrating or perforating) wounds; contused (without a break in the skin) wounds; fractures; burns; blast concussions; effects of gases and like chemical warfare agents; effects of exposure to radioactive substances.

c. Battle casualties who require admission to a medical treatment facility (MTF) or who die of their wounds after reaching any MTF are reported as WIA. Subsequent reporting of their having died of wounds may be required. The WIA category includes the died of wounds (DOW) received in action, but excludes the killed in action (KIA). Individual medical records and morbidity reports received by HQDA include, in addition to WIA, all other individuals wounded or injured in action and treated at MTFs without requiring hospital admission. This includes persons admitted and then returned to duty at MTFs forward of corps level hospitals as well as persons treated on an outpatient status. These categories are identified separately in the medical reports.

d. Died of wounds received in action describes battle casualties who die of wounds or other injuries received in action after having reached any MTF. These cases differ from battle casualties who are found dead or who die before reaching an MTF (the KIA group). The criterion is to reach an MTF while still alive. All cases counted as DOW received in action are also counted as WIA.

e. Killed in action describes battle casualties who are killed outright or who die of wounds or other injuries before reaching any MTF. The term provides a basis for distinction between KIA cases and the DOW received in action cases. (It is often impracticable to determine if deaths in combat were instantaneous.) KIA cases are never included in the WIA category or in the DOW category.

f. Missing in action describes battle casualties whose whereabouts or fate cannot be determined and who are not known to be in an unauthorized absence status (desertion or absence without leave). Missing-in-action (MIA) casualties are not usually included in medical statistical records or reports received by the Surgeon General (HQDA), but are reportable to the Adjutant General (HQDA).

g. Captured describes all battle casualties known to have been taken into custody by a hostile force as a result of and for reasons arising out of any armed conflict in which US armed forces are engaged. Captured casualties are not usually included in medical statistical records or reports received by the Surgeon General but are reportable to the Adjutant General.

h. Interned describes all battle casualties known to have been taken into custody by a nonbelligerent for-

eign power as the result of and for reasons arising out of any armed conflict in which US armed forces are engaged. Interned casualties are not usually included in medical statistical records or reports received by the Surgeon General, but they are reportable to the Adjutant General.

5-3. PATIENT ADMISSIONS AND ADMISSION RATES.

a. Admissions refer to those cases that are hospitalized for medical reasons. Admission rates contained in Section VI below reflect experience factors derived from past wars. These figures should be used as bottom-line planning factors only.

b. The admission rate for disease is affected by seasonal variations, climate, and environmental factors such as population density and sanitation, seasoning of troops, and type of action in which troops are engaged.

5-4. CLASSIFICATION OF PATIENTS.

a. Not all casualties or battle losses are patients. Patients are those personnel who are treated by a medical aidman and subsequently receive care in a medical treatment facility (MTF). For this discussion, however, the term patient means only those personnel who have been admitted to hospitals and who cannot be returned to duty within the same calendar day. Patients are classified according to the primary cause of initial admission to an MTF. They are reported to Headquarters, Department of the Army (HQDA) in one of three major classifications: disease (DIS), nonbattle injury (DNBI), or battle casualty. When a patient is admitted for unrelated conditions that require admission, such as disease and nonbattle injury, the most serious condition present is used as the main cause of initial admission. This primary cause is used in determining the classification. When a patient is admitted for several related conditions that require admission, the first condition in the chain of origin is used as the primary cause of admission. This condition governs the classification of the patient. Patients who are admitted to MTFs for bat-

tle wounds or battle injuries but who also require treatment for disease or nonbattle injury are, nevertheless, classified as battle casualties.

b. All patients other than battle injury and wounded in action and nonbattle injury cases are classified as disease cases. Patients suffering from mental disorders developed under battle conditions are classified as disease patients, not casualties. Patients readmitted as the result of an "old" traumatism are considered as disease cases. An old traumatism is defined as a case readmitted for a condition that is a result of a previously recorded traumatism (battle or nonbattle) incurred in the military service. Patients suffering from reactions to medication (other than acute poisoning) and patients admitted for the after-effect of an injury incurred prior to entering the military service are classified as disease cases. Food poisoning cases or food infection cases, except when due to food containing nonbacterial poisons, are classified as disease cases. A battle casualty patient who is dropped from medical reports as a disposition to AWOL is, if readmitted, classified as a disease patient.

c. All traumatisms are classified as nonbattle injuries except "old" traumatisms or battle injuries and wounds. The term "traumatism" refers to a condition of ill health caused by an external agent. It includes conditions resulting from acute poisonings (even though taken internally) and from exposure to heat, cold, or light. Food poisonings or food infections due to food containing nonbacterial poisons are classified as nonbattle injuries. Injuries due to the elements such as frostbite and immersion injury are considered to be nonbattle injuries even when incurred in combat areas.

d. For division level planning, one-third of all disease and nonbattle injuries (DNBI) may be expected to complete treatment at battalion aid stations or divisional treatment stations (formerly division clearing stations). Treatment can be completed at the unit or division level if there is no interference with the primary mission of reception, treatment, and evacuation. The remaining two-thirds of these patients will require evacuation and hospitalization.

e. For purposes of medical statistical reporting, a battle casualty patient (battle injury and wounded in action) is any patient admitted to an MTF for treatment of injuries and/or wounds either directly due to enemy action or sustained while engaged in combat and related thereto. A patient admitted as a battle casualty is reported as such so long as hospitalization is continuous and uninterrupted. Except for disposition by transfer to another MTF, discharge of a battle casualty patient from an MTF terminates his battle casualty status for medical reporting purposes. KIA cases are reported separately from injured or WIA case.

5-5. ESTIMATION OF PROBABLE PATIENT WORKLOAD.

a. As units increase in size, a greater proportion of their personnel are less exposed to the risk of battle wounding. While a corps may be engaged in active fighting, one or more of its divisions may not be in contact with the enemy. Elements of corps troops serving in rear areas suffer relatively few casualties. While the strength of nondivisional corps troops may approximate the strength of a division, they consist of artillery, engineers, signal troops, and other service troops; the casualty rates for all of these are low compared with those of the infantry. All of these factors operate to reduce the casualty rates of a corps as a whole far below those of its divisions actively engaged with the enemy. As a rough estimate, it may be stated that the wounded-in-action rate for a corps as a whole is about 25 percent less than the WIA rate for its component divisions. Likewise, the overall theater of operations casualty rates are even lower than those of a corps. The WIA rate for the theater is roughly 20 percent lower than the WIA rate for a corps and about 40 percent lower than that for a division. These assumptions do not take into account NBC warfare or major enemy deep strikes.

b. Subparagraph a clearly indicates that the estimation of probable casualty rates in advance is not a simple matter that can be reduced to a general formula. The first step in estimating probable casualty rates is to select a point of departure. This is prefera-

by what might be termed an average casualty day for the unit concerned. To this average casualty day must be applied the quantitative combined effect of all factors in each situation that may be expected to influence the casualty rate. The more important of these factors are discussed below.

(1) Enemy capabilities. These capabilities include all the resources and characteristics of the enemy that can be translated into casualties, such as his numerical or relative strength, the strength of his position (both natural strength and improvement by organization of the ground), his weapons, his firepower, his attitude, and his morale and general combat efficiency.

(2) Terrain. Terrain is not to be confused with position. Open terrain, affording little cover or protection, may favor one side depending upon the situation.

(3) Own scheme of maneuver. This is a very important factor. Attack is usually more costly than defense. Losses in defense are tempered by the type of defense, the degree of organization of the ground, and relative combat strength, including the element of fire power. Frontal attacks, in general, produce more casualties in the attacking force than do envelopments. Daylight

retrograde movements are extremely costly; when the retrograde movement becomes disorderly, losses may be staggering.

(4) Relative firepower. A preponderance of friendly firepower, especially in heavy weapons and air strength, will greatly decrease the capability of the enemy to inflict casualties by smothering his weapons. Conversely, relative weakness in heavy firepower will operate to increase casualty rates.

c. In preparing estimates of patients, the planner must remember that disease incidence continues during combat and that soldiers do not become careful to avoid ordinary injuries at such times. The admission rate during combat for nonbattle causes (DNBI) may even rise above the average for the following reasons:

- Necessity for haste causes a disregard of ordinary precautions.
- Fatigue not only causes actual disability, but produces a state of mind that tends to exaggerate minor ailments and injuries. While careful sorting should prevent the evacuation of any great proportion

of such cases, the operation of sorting alone places an additional burden on medical units.

d. The proportion of a command actively engaged in combat determines, to a considerable degree, the casualty rate of the unit as a whole, and this proportion varies within wide limits in units of different sizes and operations of different types. Local reserves of smaller units are ordinarily located so near the forward edge of the battle area that their exposure to risk is at least comparable with that of other elements of the unit. On the other hand, reserves are ordinarily located well to the rear and outside the zone of greatest casualty incidence. Furthermore, reserves are committed to action by smaller units at more frequent intervals than by larger units. All this points to the dangers in generalizations in the estimation of casualties. Each situation must be studied and an estimate made for each major fraction of the command rather than one estimate for the command as a whole. This is to say that the HSS planner should base his estimate of probable casualties and nonbattle losses upon the experience of the corps, or better yet, of divisions as influenced by the situation confronting them at the time. For this reason, the data in this chapter should be used with extreme caution for planning purposes.

5-6. THEATER EVACUATION POLICY.

a. The Army Medical Department (AMEDD) in a theater of operations must be responsive to the tactical commander's mission. A critical task for the theater HSS system is to minimize the adverse effect that unevacuated patients may have on the combat efficiency of a force; yet, it must maintain an adequate hospitalization and treatment capability. Successfully completing this task depends on many factors affecting the capability and limitations of HSS at each echelon. Before plans can be made to provide hospitalization and evacuation, certain problems must be resolved by command decision. One such decision is the evacuation policy.

SECTION II. MEDICAL EVACUATION POLICY

b. The theater evacuation policy is established by the Secretary of Defense, with the advice of the Joint Chiefs of Staff (JCS), and upon the recommendation of the theater commander. The policy establishes, in number of days, the maximum period of noneffectiveness (hospitalization/convalescence) that patients may be held for treatment within the theater. This policy does not mean that a patient will be held in the theater for the entire period of noneffectiveness. A patient who is not expected to be ready for return to duty within the number of days established in the theater evacuation policy is evacuated to CONUS or some other safe area. This is done as soon as treating physicians determine that such evacuation will not aggravate the patient's disabilities or medical condition.

This policy is not a substitute for clinical judgment in the management of individual patients. The policy has different meanings for different personnel, as indicated in the subsequent discussion.

(1) To the physicians and dentists engaged in direct patient treatment and decisions relating to patient disposition, it means that there is a maximum period within which clinical staffs may complete the treatment needed to return the patient to full duty within the theater. If the theater policy is 60 days and full return to duty can be predicted within that time, the patient will be retained in the theater hospital system. If the patient cannot be returned to full duty within 60 days, he will be evacuated out-of-theater as

early as clinically prudent. Once the clinical judgment has been made, the patient should be allowed to recover enough to endure the evacuation in comfort, without detailed en route treatment procedures, to avoid increasing patient morbidity or mortality. What is best for the patient will govern in any conflict with the administration of a particular evacuation policy.

(2) To the health service support planner, it means that he can compute the beds required in the theater if given the evacuation policy and other planning factors. This can be translated into the type, mix, number, and distribution of hospitals required in the theater.

(3) To the nonmedical logistician it means, in part, that he can estimate his total obligation to support this system.

(4) To the US Air Force planner, it means that he can plan accurately for the total aeromedical evacuation requirements for both intra- and intertheater patient movements.

(5) Finally, to the medical operator it means that he has a management tool which, when properly adjusted and used, will provide the balance between patient care and tactical support requirements. The medical operator will be able to tailor a medical support package specifically designed to handle patient workloads, with maximum benefit to the patients and with maximum economy of available resources.

c. To the degree that unforeseen increases in patients occur (due perhaps to an epidemic or an unusually successful enemy operation), temporary reduction in the policy may be necessary to adjust the volume of patients in the hospital system. The effect of a reduction in the evacuation policy causes an increase in the number of patients evacuated out-of-theater. This action is necessary to relieve the congestion caused by the patient increase; however, it increases evacuation asset requirements.

d. The time period established in the theater evacuation policy starts on the date the patient is admitted to the first hospital (combat zone (CZ) or communica-

tions zone (COMMZ)). The total time a patient is hospitalized in the theater for a single uninterrupted episode of illness/injury, including transit time between MTFs, should not exceed the number of days stated in the theater evacuation policy. Although convalescent centers are not hospitals, the time a patient spends in one is included in the calculation of the duration of a patient's hospital stay. For example, a theater evacuation policy of 60 days does not mean that a patient is held in the theater for 59 days and then removed. Instead, it means that a patient will be evacuated as soon as a determination is made that he cannot be returned to duty within 60 days following admission. Though guided by the evacuation policy, the actual selection of a patient for evacuation will be based on clinical judgment as to the patient's ability to tolerate and survive movement (evacuation) to the next level of hospitalization.

5.7. INTRATHEATER EVACUATION POLICY.

a. Major subordinate commands (corps) may establish intratheater patient evacuation policies within the limits of the theater patient evacuation policy and subject to approval by the theater commander. For example, a short evacuation policy is established for corps hospitals to maintain their mobility and their capability to accommodate surges in the numbers of patients. The intratheater evacuation policy, usually stated in days at the corps level, represents the maximum period of allowable hospitalization in corps hospitals. Any patient who can be expected to return to duty within the stated policy is retained in a corps hospital for definitive care and subsequent return to duty. Any patient who cannot be expected to be returned to duty within the stated policy is given immediate early definitive care. He is then programmed for evacuation to the COMMZ as soon as his condition and transportation resources permit. Intratheater patient evacuation policies must be flexible and changed as dictated by the tactical situation. (These policies may be adjusted in the early days of a contingency operation as the availability of treatment facilities and evacuation means permit.) Intratheater evacuation policies may differ among the hospitals depending on their

location, facilities, staff, and the types of patients received.

b. When patients are received at a discernibly constant rate, the evacuation policy at a specific echelon may be adjusted to retain and return to duty those patients who do not require specialized treatment in COMMZ general hospitals. However, when increased patient loads are anticipated, the intratheater evacuation policy must be adjusted to make additional beds available for both current and anticipated needs. As a result, a larger proportion of patients admitted in the CZ are evacuated to the COMMZ much earlier than under average conditions. The displacement of hospitals temporarily reduces the number of beds available and may result in a greater number of patients being evacuated out of the combat zone during the period of relocation.

5.8. IMPACT OF THEATER EVACUATION POLICY ON HEALTH SERVICE SUPPORT REQUIREMENTS.

a. As previously discussed, the number and types of MTFs in both the combat and communications zones will be affected by the theater evacuation policy. A short intratheater evacuation policy, coupled with a long theater evacuation policy, will require fewer combat zone hospital units and more COMMZ general hospital units/facilities. With a shorter theater evacuation policy, fewer hospital beds will be required in the theater and a greater number of beds will be required in CONUS. A long theater evacuation policy results in a greater accumulation of patients and a demand for a larger medical force structure in the theater, and it decreases CONUS requirements.

b. Medical materiel and maintenance requirements will be affected. The longer the theater evacuation policy, the greater the demand for logistical support.

c. Hospital construction, engineer support requirements, and all aspects of base development for HSS will be affected. A longer theater evacuation policy demands the establishment of a larger number of hospitals in the COMMZ. Regardless of the construc-

tion stipulated, the number of manhours and materials required must be considered.

d. Evacuation requirements will be affected. A short theater evacuation policy would create a greater demand for intertheater Air Force evacuation resources. A shortened combat zone evacuation policy would have the same effect in relation to resources required for intratheater evacuation requirements.

e. Patients returned to duty within the theater will be affected. A long theater evacuation policy provides for a greater proportion of patients to be returned to duty within the theater and thus reduces the loss of experienced manpower.

f. Replacement requirements will vary. A short evacuation policy will increase the requirements for replacements to meet the rapid personnel turnover which would be expected, especially in combat units. The impact this would have on both intra- and inter-theater transportation and other requirements must also be considered.

5-9. FACTORS DETERMINING THE EVACUATION POLICY. These factors include —

- Nature of combat operations. Will they be operations of short duration and small magnitude? Will they be operations of long duration and heavy magnitude?

5-11. COORDINATION. Except under unique circumstances, the Army controls no transportation means for evacuation of patients from the CZ to the COMMZ or from the COMMZ to the zone of interior (ZI) or to CONUS. For additional means of evacuation, coordination must be effected with —

- The particular service controlling aircraft and ships.

Will nuclear, chemical, or biological weapons be employed? Will only conventional weapons be utilized? Is a static combat situation expected?

- Number and type of patients anticipated. Admission rates vary widely in different geographical areas of the world and in different types of military operations. Section VI discusses admission rates under varying geographical/climatic/organizational conditions.

- Evacuation means. The means available for evacuation of patients from the theater of operations to the Zone of Interior (CONUS) is critical. The means of patient evacuation used within the theater of operations are discussed in Section III.

- Availability of replacements. The capability of the CONUS base to furnish replacements to the theater is important. For each patient who is evacuated from the theater to CONUS, a fully trained and equipped replacement must be provided. During a small-scale conflict overseas, CONUS-based replacement capability would be much greater when compared to a large-scale conflict such as World War II. If the CONUS base can furnish replacements in adequate numbers, a shorter evacuation policy may be indicated.

- Availability of in-theater resources. Limitations of all HSS resources will have a definite impact on the evacuation policy. The more limitations (or shortages), the shorter will be the theater evacuation policy.

SECTION III. MEDICAL TRANSPORTATION

- The transportation elements controlling trains and other forms of transportation.

Coordination with these other services and elements is usually accomplished through medical regulating. The surgeon, however, must forecast the requirements for air and surface evacuation so that coordination for its procurement may be done in advance of the need. Aircraft are requested on the basis of anticipated needs and to meet emergencies such as those that may occur

5-10. ACCEPTABLE PERCENTAGE OF FILL FOR AVAILABLE HOSPITAL BEDS.

a. Another management tool available to the planner for HSS is the establishment of a percentage limiting the number of beds that may be occupied within a command at any given time. This percentage, as a tool, is small in scope but more immediate in impact than adjusting the evacuation policy. The use of this factor within the overall limitations of the intratheater evacuation policy, allows the planner to respond immediately to the course of action selected by the commander. For example, a corps commander has been assigned a mission requiring offensive action. The planner for HSS anticipates increased casualties as a result of this action. During the previous defensive operation, a 15-day evacuation policy coupled with a 75 percent bed-fill was in effect. The corps commander anticipates initiating action within 48 hours. In this scenario, the adjustment of the evacuation policy would not provide for immediate flexibility necessary to support the operation. However, by reducing the percent bed-fill within the command, the medical commander can rapidly achieve the availability of the beds necessary to meet casualty needs.

b. This adjustment of the percentage factor depends on adequate HSS assets at echelons above corps and may not be done without extensive coordination. Also, adequate evacuation capability must exist to support any such adjustment.

in nuclear warfare where combat zone hospitals are suddenly filled to capacity. In general, air transportation of patients is preferred. Adequate ground transportation must also be available in case conditions make air transportation inadequate or impractical.

5-12. RESOURCES. Table 5-1 lists the modes of transportation usually available to the Army for the evacuation of patients within a theater of operations depicting patient-transporting capacity.

SECTION IV. CALCULATION OF PATIENT EVACUATION REQUIREMENTS

5-13. TIME FACTORS. This section presents a methodology for calculating the time and the number of units of transport required to evacuate a given number of patients or to support a specific operation. The following are time factors for evacuation of patients (including loading and unloading):

- Litter squads. The factors include average terrain, four-man squad — 900 meters and return in 1 hour; and mountainous terrain, six-man squad — 370 meters and return in 1 hour.
- Ambulance (wheel and track vehicle) during combat in the division area. Eight kilometers and return in 1 hour (optimal weather and terrain).
- Aircraft. The factors include helicopter — 105 kilometers one way in 1 hour (based on the operational capability and patient loading ease of UH-1V helicopter); transport — 360 kilometers one way in 2 hours (based on 1 1/2 hour "block to block" mission for C-130E aircraft and 30 minutes patient loading time); and army airplane — 200 kilometers one way in 1 hour (based on the operational capability of U-21 aircraft, including patient loading time).

5-14. COMPUTATIONS.

a. The time and the number of units of transport required to evacuate a given number of patients may be computed by using the following formulas:

$$(1) \text{ Time required: } T = \frac{N \times t}{U \times n}$$

$$(2) \text{ Units required: } U = \frac{N \times t}{T \times n}$$

Where:

N = Total number of patients to be evacuated.

n = Number that can be transported in one load.

T = Total time.

t = Time required for one round trip.

U = Number of units of transport (litters, ambulances, and aircraft).

b. The amount of evacuation resources required to support a specific operation may be calculated by using the following formula for either WIA or DNBI patients. (See paragraphs 5-15 and 5-16 for example problems and solutions.)

$$\left(\frac{A \times B}{D \times E} \right) = \text{ambulance requirements by type per day}$$

Where:

A = The total patients (WIA or DNBI) generated for a specific operation per day. This figure may be calculated using Section VI for specific types of operations.

B = The percentage of those patients in A above requiring evacuation. Normally, this figure will exceed 100 percent as a recognition of the fact that many patients will need to be moved more than once. The number of times a patient will be moved will depend on many factors. In assigning percentage as a planning factor, the HSS planner must consider —

- Terrain.
- Force structure.
- Enemy weapons systems.
- Weather.
- Airfield or seaport locations.
- Other factors affecting patient flow.

C = The average number of patients moved by a means of evacuation. The figure will vary depending on the type of ambulance (ground or air) or the specific model of vehicle.

D = The average number of missions a particular evacuation vehicle can complete per day.

E = The dispersion allowance for the specific types of evacuation vehicles in the formula. The dispersion allowance is a recognition that a specific percentage of vehicles in the force will be unavailable for missions due to maintenance, crew rest, combat loss, or replacement lag time. The HSS planner will determine the specific percentage used by reviewing maintenance historical data and considering the theater in terms of the enemy, terrain, and weather. To convert the dispersion allowance into a factor, see Table 5-2.

Table 5-2. Dispersion Allowance/Factors Conversion Table¹

Dispersion allowance (percent) ¹	Factor
5	1.05
10	1.11
15	1.18
20 ²	1.25
25	1.33
30	1.43
35	1.54
40	1.67
45	1.82
50	2.00

FOOTNOTES:

¹Based on World War II and Korean conflict.

²Allowances of less than 20 percent are not normally used.

5-15. EXAMPLE PROBLEMS. To determine the requirements for air and ground evacuation resources to support a specific operation you, as the health service support planner, have determined information necessary to compute this problem. Complete the calculations for air and ground evacuation vehicles by using formulas provided in paragraph 5-14b. Compare the answers to the solutions provided in paragraph 5-16.

a. Using the information below, calculate air ambulance requirements.

- Type of patients:

DNBI 413

WIA 588

- Patients by type requiring air evacuation:

DNBI 120%

WIA 180%

- Average number of patients per mission: 3.

- Average number of missions per helicopter per day: 11.

- Dispersion allowance: 30%

- b. Using the following information, calculate ground ambulance requirements.

- Type of patients:

DNBI 413

WIA 588

- Patients by type requiring ground evacuation:

DNBI 130%

WIA 70%

- Average number of patients per trip: 2.

- Average number of trips per day per ambulance: 6.

- Dispersion allowance: 35%.

5-16. EXAMPLE SOLUTIONS.

a. Calculate air ambulance requirements as follows:

- Type of patients:

DNBI 413

$\times 1.20$

496 Patients requiring air evacuation

WIA 588

$\times 1.80$

1,058 Patients requiring air evacuation

496 DNBI

$+ 1,058$ WIA

1,554 Total patients requiring air evacuation

- $\frac{1,554}{3}$ patients per mission = 518 missions.

- $\frac{518}{11}$ missions per day = 47 helicopters.

- 47×1.43 dispersion factor = 67 helicopters.

b. Calculate ground ambulance requirements as follows:

- Type of patients:

DNBI 413

$\times 1.30$

536 Patients requiring ground evacuation

WIA 588

$\times .70$

412 Patients requiring ground evacuation

536 DNBI

$+ 412$ WIA

948 Total patients requiring ground evacuation

- $\frac{948}{2}$ patients per trip = 474 trips.

- $\frac{474}{6}$ trips per day = 79 ambulances.

- 79×1.54 dispersion factor = 122 ambulances.

5-17. FACTORS INFLUENCING THE NUMBER OF OPERATING BEDS.

- a. The number of hospital beds required in the ZI (which includes CONUS) to support the theater of operations will vary. With a shorter theater evacuation policy —
 - Fewer hospital beds will be required in the theater.
 - A greater number of beds will be required in the ZI (especially in CONUS).
- b. A long theater evacuation policy will increase the number of hospital beds in the theater and decrease ZI (CONUS) bed requirements. Whenever an HSS requirement is reduced in a specific area (CZ or COMMZ), it must be added to some other area. A patient requiring 59 days of hospitalization also requires a bed and a medical staff for 59 days. He requires this whether the entire period is spent in the theater or divided between 29 days in the theater and 30 days in the ZI (CONUS). The most intensive and demanding medical requirements are experienced during the admission, initial patient workup, and the resuscitative phase. The requirements remain a theater responsibility, regardless of the theater evacuation policy.
- c. The total number of operating beds is based upon the commander's overall evaluation to include —
 - Space limitations.
 - Staffing (to include specific type bed requirements).
 - Logistical and administrative support.
- d. The facility is staffed for operation of these beds under normal circumstances. Medical commanders at all levels recognize that staffing is a critical factor when considering the total number of operating beds. Limitations on operating beds can arise from a personnel shortage in any service of the hospital. For example, personnel shortages in the nursing service may require closure of a ward or several wards. Likewise, personnel shortages in the pharmacy, laboratory, and radiology services may so constrict the support provided that operating beds will be reduced. Often the type bed reported must be considered in relation to staffing. The number of beds on the intensive care ward will require the staffing of a proportionally larger team of physicians, nurses, and aidmen; however, a minimal care ward consisting of a larger number of beds may require a much smaller number of supervisory personnel and aidmen.

SECTION V. PLANNING HOSPITAL BEDS

- e. Limiting factors on operating beds may arise from shortages in logistical support or administrative services. For example, there may be a deficiency within the utilities area. Electrical power, waste disposal means, water, or fuel may be insufficient for hospital needs. An inadequate laundry service will place a tremendous handicap on the surgical service. A shortage of personnel in the food service branch will reduce the feeding capability. The shortage of a critical item of supply can impact adversely on patient care capability. Any of these problems, or others, may cause curtailment of services and a reduction in operating beds.
- f. The augmentation of a hospital by other type medical units (for example, medical treatment company) and attachment of medical cellular teams can result in an increase in the total operating beds. This assumes that adequate space, ancillary services, and logistical and administrative support are available to sustain the increase in operating beds.

5-18. DESIGNATED BED CAPACITY. The number of patient beds specified in a TOE is the actual number of beds a stated type of MTF is designed to provide. Whenever the basic capacities of a MTF are modified by higher headquarters to either augment or diminish the bed capacity, the modified capacity then becomes the normal/designated bed capacity.

SECTION VI. CALCULATION OF HOSPITAL BED REQUIREMENTS

5-19. APPLICATION OF METHODOLOGY. This section presents a methodology for calculating the number of hospital beds required at each level of HSS (except unit level) within the theater of operations.

- a. The term "theater beds" includes both COMMZ and CZ hospitals. It does not include unit or division level MTFs, area dispensaries, or medical treatment companies. The number of patients remaining in CZ

- and COMMZ hospitals during a particular time period can be determined if one of the following is available:
- The projected daily average number of hospital admissions.
 - The evacuation policy.
 - b. An estimate of the number of hospital beds required to support a particular force can then be

determined by applying a factor to the calculated number of patients remaining to allow for the required dispersion of patients. This methodology is principally described in terms of patients remaining; however, these same procedures are applicable to the calculation of patient dispositions as well. To calculate patient dispositions, disposition factors are substituted for accumulation factors. Multiplication by a dispersion factor is omitted from this procedure. The bed require-

ment methodology presented in paragraph 5-21 is for an established theater of operations. It also shows how the theater beds impact on CONUS bed requirements.

5-20. DEFINITIONS OF TERMS.

a. Levels of hospitalization. For the methodology described here, the levels of hospitalization include the CZ, the COMMZ, and the CONUS. The CZ and COMMZ levels of hospitalization may be considered, in combination, as the theater level. Likewise, all theaters of operations combined with the CONUS constitute the total (worldwide) hospitalization system.

b. Periods of estimate. These are consecutive periods (intervals) of time (in days), usually measured from the beginning of a military operation. Normally, the time period length for manual calculations is 30 days. Bed requirements are normally calculated at the end of each time period.

c. Hospital admission. This is the initial entry of an individual as an inpatient into a hospital for a single episode of illness or injury anywhere in the theater of operations. If the same inpatient is discharged from a hospital and later readmitted for a different illness/injury, or for a recurrence of the same illness/injury, the individual is counted as a separate admission.

d. Patient admission rate. This is the average daily number of admissions per 1,000 average daily strength for a specified portion of the population served and for specified period(s). Separate admission rates are always provided for wounded-in-action patients and disease and nonbattle injury patients.

e. Accumulation factor. Assuming a constant admission of one patient per day during a specific period of estimate (and none thereafter), this factor is the expected number of patients remaining (occupying beds) at a particular level of hospitalization at the end of each consecutive period. Accumulation factors are available for each patient classification (WIA and DNB) and for different evacuation policies in Tables 5-7, 5-9, and 5-11.

f. Final or intermediate dispositions. Final dispositions are returns to duty (RTD), died in hospital (DIH), and disability discharge (CONUS level only). An intermediate disposition is a patient evacuation (evac) to the next level of hospitalization (or in some cases, another hospital at the same level).

g. Disposition factor. Assuming a constant admission of one patient per day during a specific period of estimate (and none thereafter), the disposition factor is the expected number of patients receiving a particular type disposition from a particular level of hospitalization during each consecutive period. Types of disposition include returned to duty, died in hospital, evacuated, or disability discharge (CONUS only). Disposition factors are provided for each patient classification, for each disposition type, and for different evacuation policies in later appearing Tables 5-7, 5-9, and 5-11.

h. Dispersion allowance. This is the percentage of all hospital beds that are required to remain empty to allow for necessary patient dispersion and hospital flexibility. A certain flexibility is needed to initiate hospital relocation using this uncommitted bed capacity or to absorb the sudden influx of patients generated by a mass casualty situation. Additionally, separation of patients for reasons of contagious disease, sex, type treatment (medical or surgical), and psychiatric problems (among others) creates a certain number of empty beds within the various wards of hospital.

i. Dispersion factors. This is a factor used in computing bed requirements. It is mathematically derived from the dispersion allowance. A dispersion factor equals 100 percent minus (100 percent minus the dispersion allowance). When multiplied by the calculated number of patients remaining, it yields the number of beds required to provide necessary dispersion. Corresponding to a dispersion allowance of 20 percent, the dispersion factor is 1.25 (Table 5-2). In determining the dispersion allowance, the planner must be continually informed as to both the existing and possible future tactical situations. The normal dispersion allowance/factor (20 percent/1.25) is based on World

War II and the Korean conflict and may have to be increased considerably for any future war. Due to increased exposure to deep penetrations and destruction of support areas by the enemy, MTFs will have to be small and well-dispersed. In addition, certain MTFs may be retained in a readiness status to replace those facilities which are destroyed by the enemy. These contingencies will decrease the efficient use of beds and require the application of a greater dispersion allowance/factor for planning purposes. Normally, 80 percent occupancy of available beds is the operational maximum. This, therefore, equates to a 20 percent dispersion allowance.

5-21. EXAMPLE PROBLEM. Table 5-3 shows the problem statement for the data needed prior to and during the example application of this methodology.

a. The given force for this problem is a corps consisting of three mechanized infantry divisions in a mature European theater. The operational area (terrain) consists of plains. The time of the year is midwinter. Two of the divisions are in the theater. One division will arrive in theater on D+59. The current corps operations are defensive with offensive operations commencing on D+60 and planned through D+119. The CZ evacuation policies are 7 days for the first 60 days and 15 days for D+60 through D+119. The COMMZ evacuation policies are 30 days for the first 60 days and 60 days for D+60 through D+119. The dispersion allowance will be 25 percent for the CZ and 20 percent for the COMMZ and 10 percent for the CONUS. Time period length is 30 days.

b. Determine the theater hospital beds required to support the given force from D through D + 119. Also determine how the theater policy impacts on CONUS bed requirements. The given information is graphically depicted in Table 5-4. The admission rates can be determined from Tables 5-5a through 5-5h based on the type units, theater, terrain, and climate given in the problem statement. In this case, Table 5-5b was used. The DNB rates on the example problem statement (Table 5-3) are the sum of the NBI and the DIS rates in the patient admission rate tables. In this problem, you chose to use nondivisional reserve rates for

the corps rear area (nondivisional support troops). To solve this problem, you determine the rates which best fit the problem statement. You choose —

- Mechanized defensive operations rates for period 1 and 2 for the corps forward area (division troops and nondivision combat troops).
- Mechanized offensive operations rates for periods 3 and 4 for the corps forward area (division troops and nondivision combat troops).
- Nondivisional reserve operations rates for corps rear area (nondivision support troops).
- Nondivisional inactive operations rates for the COMMZ (nondivision support troops).

5-22. METHODOLOGY FOR THE COMBAT ZONE.

a. Using Tables 5-3, 5-6, and 5-7 (or appropriate actual figures), select the type CZ population to be served according to the expected admission experience of division and nondivision combat troops as well as nondivision support troops, the number of 30-day periods, and the evacuation policy for each period. The process for determining hospital beds required is described in paragraph 5-26 b and c.

b. Perform (1) through (4) below for WIA patients and then again for DNBI patients for each period of estimate.

(1) Use the example problem as shown in Table 5-3 (or appropriate actual figures) to obtain the total average daily CZ admissions (WIA or DNBI) for the current period of estimate. Multiply the average daily strength (for each type population served) by the corresponding admission rate (per 1,000 troops), then sum the results obtained for each population served separately (division and nondivision troops). Check numbers obtained for correctness with numbers shown in the example solution in Table 5-6. Note that in Table 5-6 the totals reflected are broken down by patient classifications (WIA/DNBI) and not by the type of troop population.

Table 5-3. Example Problem Statement

AVERAGE DAILY STRENGTHS		Periods (30 days)	
		1st and 2nd	3d and 4th
COMBAT ZONE	Division troops	32,000	48,000
	Nondivision combat troops ¹	24,000	36,000
Communications zone			
Nondivision support troops		20,000	30,000
EVACUATION POLICIES			
Combat zone		7 days	15 days
COMMZ		30 days	60 days
DISPERSION FACTOR ²			
Combat zone		1.33 (25%)	1.33 (25%)
COMMZ		1.25 (20%)	1.25 (20%)
CONUS		1.11 (10%)	1.11 (10%)
ADMISSION RATES			
Combat zone			
Division troops/nondivision combat troops			
WIA		1.54	4.37
DNBI		2.41	4.09
Nondivision support troops			
(Corps rear areas)			
WIA		.28	.28
DNBI		1.87	1.87
Communications zone			
WIA		.05	.05
DNBI		.95	.95

FOOTNOTES:

¹Use division admission rates since this most closely fits the situation.

²Factor determined from Table 5-2 based on allowance given in problem statement.

Table 5-4. Example Preliminary Bed Requirement Information (Problem Statement Graphically Depicted)

Combat zone (population served ¹)								
Period of estimate ²	Intratheater evacuation policy (days)	Division troops & nondivision combat troops				Nondivision support troops		
		Avg daily (1,000s) ³	WIA admission rate (per 1,000)	DNBI admission rate (per 1,000) ²	Avg daily strength (per 1,000)	WIA admission rate (per 1,000)	DNBI admission rate (per 1,000)	
1	7	56	1.54	2.41	20	.28	1.87	
2	7	56	1.54	2.41	20	.28	1.87	
3	15	84	4.37	4.09	30	.28	1.87	
4	15	84	4.37	4.09	30	.28	1.87	

Communications zone (population served⁴)

Periods of estimate ⁴	Theater evac policy (days)	Avg daily strength (1,000s)	WIA admission rate (per 1,000)	DNBI admission rate (per 1,000)	CONUS ⁴ average daily strength (1,000s)
1	30	20	.05	.95	0
2	30	20	.05	.95	0
3	60	30	.05	.95	0
4	60	30	.05	.95	0

FOOTNOTES:

¹Dispersion factor is 25% (1.33).

²Thirty days each.

³Use the closest average daily strength for the population to be served during each period.

⁴Dispersion factor is 20% (1.25).

Table 5-5. Patient Admission Rates

a. Overall in WW II, Korean Conflict, and Vietnamese Conflict
 (Admissions per 1,000 strength per day)

WIA	INFANTRY			WIA	MECHANIZED			WIA	ARMORED			WIA	NONDIVISIONAL		
	NBI	DIS	Total		NBI	DIS	Total		NBI	DIS	Total		NBI	DIS	Total
Offensive Operations															
WW II — Europe (See Table 5-5b)															
3.04	.54	2.07	5.65	2.17	.43	1.61	4.21	1.29	.30	1.14	2.73	.39	.34	.99	1.72
WW II — Italy (See Table 5-5c)															
1.97	.53	3.62	6.12	2.46	.52	2.60	5.57	2.93	.49	1.57	4.99	.40	.29	1.72	2.41
WW II — Mideast (See Table 5-5d)															
2.29	.38	1.58	4.25	2.30	.39	1.59	4.27	2.29	.38	1.58	4.25	.40	.35	1.25	2.00
WW II — Central and South Pacific (See Table 5-5e)															
1.91	.28	.89	3.08	1.77	.25	.66	2.68	1.16	.21	.42	2.24	.63	.21	.55	1.39
WW II — Southwest Pacific (See Table 5-5f)															
2.08	.61	5.12	7.81	1.92	.54	3.79	6.24	1.75	.45	2.44	4.64	.99	.35	3.71	5.05
Korean Conflict (See Table 5-5g)															
.82	.62	1.05	2.49	.76	.55	.78	2.09	.69	.46	.50	1.65	.54	.40	1.74	2.68
Vietnamese Conflict (See Table 5-5h)															
.42	.15	.74	1.31	.39	.14	.55	1.08	.35	.11	.35	.81	.14	.15	.77	1.06

(Admissions per 1,000 strength per day)

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Table 5-5. Patient Admission Rates — (Cont'd)**c. Italy, World War II**

(Admissions per 1,000 strength per day)

Terrain and Climate	INFANTRY			MECHANIZED			ARMORED			NONDIVISIONAL		
	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total
Offensive Operations												
Mt-Cold	4.68	.82	4.69	10.19	4.32	.72	3.47	8.50	3.94	.61	2.23	6.78
Plains-Cold	15.60	.71	4.79	21.10	14.38	.62	3.54	18.54	13.14	.52	2.28	15.94
Plains-Hot	12.51	.71	2.18	15.40	11.53	.62	1.62	13.76	10.53	.52	1.04	12.09
Mt-Hot	4.26	.62	3.61	8.49	4.44	.61	2.83	7.87	4.60	.58	2.04	7.22
Defensive Operations												
Mt-Cold	.26	.25	1.49	2.00	.25	.22	1.11	1.57	.22	.18	.71	1.11
Plains-Cold	2.18	.55	4.57	7.30	2.02	.49	3.38	5.88	1.84	.41	2.18	4.43
Plains-Hot	.75	.58	2.64	3.97	.70	.51	1.96	3.16	.63	.43	1.26	2.32
Reserve Operations												
Mt-Hot	.45	.49	1.48	2.42	.42	.43	1.10	1.95	.38	.36	.70	1.44
Plains-Cold	.19	.49	3.09	3.77	.18	.43	2.29	2.90	.16	.36	1.47	1.99
Plains-Hot	.14	.61	3.93	4.68	.08	.56	2.83	3.47	.01	.50	1.71	2.22
Pursuit Operations												
Mt-Hot	3.61	.62	2.51	6.74	3.33	.55	1.86	5.73	3.04	.46	1.19	4.69
Plains-Cold	.63	.66	1.03	2.32	.59	.58	.77	1.93	.53	.49	.49	1.51
Plains-Hot	1.28	.54	1.46	3.28	1.46	.48	1.14	3.08	1.62	.41	.81	2.84
Inactive Operations												
Plains-Cold	.52	.43	4.29	5.24	.81	.38	3.17	4.36	1.08	.32	2.04	3.44
Plains-Hot	1.15	.34	2.19	3.68	1.07	.30	1.62	2.99	.97	.25	1.04	2.26
Amphibious Operations												
Plants-Cold	6.06	.27	1.30	7.63	5.59	.24	.97	6.79	5.10	.20	.62	5.92
Plains-Hot	16.05	1.36	6.30	23.71	14.79	1.19	4.66	20.63	13.51	1.00	.62	17.51
River-Crossing Operations												
Mt-Cold	1.78	.32	4.32	6.42	1.65	.29	3.20	5.13	1.50	.24	2.06	3.80
Plains-Cold	2.68	.71	4.39	7.78	2.48	.62	3.25	6.34	2.26	.52	2.09	4.87
Plains-Hot	5.64	.57	2.16	8.37	5.20	.50	1.60	7.30	4.75	.42	1.04	6.20
Mt-Hot	1.08	.33	2.88	4.29	1.00	.29	2.13	3.42	.91	.24	1.37	2.52

d. Mideast Wars (Between Opposing Non-US Forces)

(Admissions per 1,000 strength per day)

Terrain and Climate	INFANTRY			MECHANIZED			ARMORED			NONDIVISIONAL		
	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total
Offensive Operations												
Desert-Cold	2.29	.38	1.58	4.25	2.30	.39	1.59	4.27	2.29	.38	1.58	4.25

(Admissions per 1,000 strength per day)

Terrain and Climate	INFANTRY				MECHANIZED				ARMORED				NONDIVISIONAL			
	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total
Mt-Hot	9.12	.46	2.20	11.78									3.00	.34	1.35	4.65
Plains-Cold					Offensive Operations											
					Reserve Operations											
	.45	.26	3.93	4.64									.15	.19	2.41	2.75
Mt-Hot Plains-Cold					Inactive Operations											
	0	.27	.72	.99									0	.20	.44	.64
	0	.07	.33	.40									0	.05	.20	.25
Amphibious Operations																
Mt-Jungle	4.48	.43	.76	5.67									1.47	.32	.47	2.26
Plains-Jungle	5.64	.64	.64	6.92									1.86	.47	.39	2.72
Plains-Hot	12.78	.49	.72	3.99									4.20	.36	.44	5.00

(Admissions per 1,000 strength per day)

Terrain and Climate	INFANTRY			MECHANIZED			ARMORED			NONDIVISIONAL		
	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total
Mt-Cold	4.13	.42	5.21	9.76								
Mt-Hot	2.68	.49	4.64	7.81					1.36	.31	3.20	4.87
Plains-Hot	3.65	.40	4.23	8.28					.78	.38	4.00	5.18
Mt-Jungle	1.61	.56	3.70	5.87					1.20	.30	2.60	4.10
Plains-Jungle	4.16	2.05	2.29	8.50					.53	.41	2.27	3.21
									1.37	1.52	1.41	4.30
Plains-Cold	0	.55	5.46	6.01								
									0	.41	3.35	3.76
Mt-Hot	17.75	.61	2.50	20.86								
									5.84	.35	1.54	7.73
Plains-Cold	0	.67	5.47	6.14								
									0	.50	3.36	3.86

g. Korean Conflict

(Admissions per 1,000 strength per day)

Terrain and Climate	INFANTRY			MECHANIZED			ARMORED			NONDIVISIONAL						
	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total				
Mt-Cold	3.54	1.40	1.67	6.61	3.27	1.22	1.24	5.72	2.98	1.08	.79	4.80	.19	.34	1.48	2.01
Plains-Cold	1.46	1.37	2.12	4.95	1.35	1.20	1.57	4.12	1.23	1.01	1.01	3.25	.48	1.01	1.30	2.79
Mt-Hot	2.42	.75	1.58	4.75	2.24	.66	1.17	4.06	2.04	.55	.75	3.34	.07	.29	1.02	1.38
Defensive Operations																
Mt-Cold	4.75	3.51	1.35	9.61	4.38	3.06	1.00	8.44	4.00	2.59	.64	7.23	.43	.41	1.62	2.16
Plains-Cold	.70	3.31	1.41	5.42	.65	2.88	1.05	4.48	.59	2.44	.67	3.70	.23	2.45	.87	3.55
Plains-Hot	8.03	.70	2.51	11.24	7.40	.62	1.86	9.88	6.76	.52	1.19	8.47	2.64	.52	1.54	4.70
Mt-Hot	2.99	.86	2.28	6.13	2.76	.75	1.69	5.20	2.52	.63	1.09	4.24	1.47	.55	2.54	4.56
Reserve Operations																
Mt-Cold	.05	.56	1.18	1.79	.05	.49	.88	1.42	.04	.41	.56	1.01	.02	.41	.72	1.15
Plains-Cold	.29	1.11	1.40	2.80	.27	.97	1.04	2.28	.24	.82	.67	1.73	.10	.82	.86	1.78
Plains-Hot	.04	.38	.94	1.36	.04	.34	.70	1.08	.03	.28	.45	.76	.01	.28	.58	.87
Mt-Hot	.07	.45	.92	1.44	.07	.40	.69	1.15	.06	.33	.44	.83	.02	.33	.56	.91
Pursuit Operations																
Mt-Cold	.64	1.85	1.33	3.82	.60	1.62	.99	3.20	.54	1.37	.63	2.54	.21	1.37	.82	2.40
Plains-Cold	.39	1.23	.89	2.51	.27	.84	.66	1.77	.13	.44	.42	.99	0	0	0	0
Mt-Hot	1.40	.56	1.27	3.23	1.30	.49	.94	2.73	1.18	.41	.60	2.19	.60	.44	1.28	2.32
Inactive Operations																
Mt-Cold	.15	.60	.89	1.64	.15	.53	.66	1.33	.13	.44	.42	.99	.01	.25	1.27	1.53
Plains-Cold	.07	.23	.46	.76	.07	.21	.35	.62	.06	.17	.22	.45	.02	.17	.28	.47
Plains-Hot	.14	.18	.32	.64	.14	.16	.24	.54	.12	.13	.15	.40	.05	.13	.20	.38
Mt-Hot	.14	.24	.54	.92	.14	.22	.41	.76	.12	.18	.26	.56	.05	.18	.33	.56
Amphibious Operations																
Plains-Hot	1.83	.18	.26	2.27	1.69	.16	.20	2.05	1.54	.13	.12	1.79	.60	.13	.16	.89
River-Crossing Operations																
Mt-Cold	6.94	1.37	2.62	10.93	6.40	1.20	1.94	9.53	5.84	1.01	1.25	8.10	2.28	1.01	1.61	4.90
Plains-Cold	7.20	1.19	1.22	9.61	6.64	1.04	.91	8.58	6.06	.88	.58	7.52	2.37	.88	.75	4.00
Plains-Hot	3.32	.55	1.46	5.33	3.07	.49	1.08	4.63	2.80	.41	.69	3.90	1.09	.41	.90	2.40
h. Vietnamese Conflict																
(Admissions per 1,000 strength per day)																
Terrain and Climate	INFANTRY			MECHANIZED			ARMORED			NONDIVISIONAL						
	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total	WIA	NBI	DIS	Total
Jungle-Hot	.42	.15	.74	1.31	.39	.14	.55	1.08	.35	.11	.35	.81	.14	.15	.77	1.06

(2) Note that the period of estimate numbered "1" in Table 5-6 corresponds to the current period of estimate in Table 5-7. Locate the appropriate accumulation factor column (WIA or DNBI) in Table 5-7 by noting the evacuation policy for that current period of estimate. Various combination sets of evacuation policies are identified. For subsequent consecutive periods, locate the appropriate evacuation policy combination which applies to your particular problems.

(3) Using the same solution shown in Table 5-6 (or appropriate actual figures), obtain the number of current period admissions (WIA or DNBI) that are still remaining in the CZ hospitals at the end of the current

period by multiplying the first accumulation factor by the total average-daily admissions in the current period. Obtain the number of current period admissions (WIA or DNBI) that are still remaining in CZ hospitals at the end of the next period by multiplying the second accumulation factor by the total average daily admissions in the current period. Continue this process for patients remaining at the end of other successive periods until all nonzero accumulation factors have been used.

(4) Using the same solution shown in Table 5-6 (or appropriate actual figures), add current period admissions remaining in CZ hospitals at the end of succe-

sive periods of estimate with any previous admissions still remaining in these hospitals at the end of the same successive periods. DNBI results, as they are obtained, should be added at this point with WIA results to obtain total patients remaining in CZ hospitals. (Table 5-12 illustrates the process used to obtain the total patients remaining in CZ hospitals for period 1.)

c. Obtain the CZ bed requirements using total WIA and DNBI requirements at the end of each 30-day period of estimate as follows: multiply the total patients remaining figures derived earlier by the CZ dispersion factor as shown in Table 5-3.

Table 5-6. Example Calculations of Combat Zone Hospital Bed Requirements

Patient class	Current period	Evac policy	Div & nondiv cbr troops	Nondiv spt trps	CZ accumulation factors for consecutive periods				CZ patients remaining at end of consecutive periods				
					Total	1	2	3	4	1	2	3	4
WIA	1	7	86.24	5.60	91.84	3.1063	0	0	0	285.28	0	0	0
	2	7	86.24	5.60	91.84		3.1063	0	0		285.28	0	0
	3	15	367.08	8.40	375.48			6.6306	0			2,489.66	0
	4	15	367.08	8.40	375.48				6.6308				2,489.66
DNBI	1	7	134.96	37.40	172.36	2.7768	0	0	0	478.61	0	0	0
	2	7	134.96	37.40	172.36		2.7768	0	0		478.61	0	0
	3	15	343.56	56.10	399.66			6.1563	0			2,460.43	0
	4	15	343.56	56.10	399.66				6.1563				2,460.43

Total patients remaining in combat zone hospitals (from population served)

Combat zone dispersion factor (1.33) (allowance = 25%)

Combat zone bed requirements at end of each 30-day period

763.89	763.89	4,950.09	4,950.09
× 1.33	× 1.33	× 1.33	× 1.33
1,016	1,016	6,584	6,584

NOTE: The above example numbers must be substituted with actual numbers when calculating actual operational bed requirements.

Table 5-7. Example Accumulation and Disposition Factors — Combat Zone¹

Periods of estimate ²	Intra-theater evacuation policy (days)	Accumulation ³	Wounded in action		Evacuated ⁶	Accumulation ³	Disease/nonbattle injuries		Evacuated ⁶
			Return to duty ⁴	Died in hospitals ⁵			Return to duty ⁴	Died in hospitals ⁵	
1	5	2.0265	.9736	.3243	26.6756	1.7676	5.7175	.0370	22.4779
2	5	0	.1034	.0177	1.9054	0	.5825	.0020	1.1831
1	7	3.1063	1.6371	.3560	24.9006	2.7768	8.6334	.0419	18.5479
2	7	0	.2524	.0250	2.8284	0	1.2336	.0031	1.5401
1	10	4.7076	2.4207	.3850	22.4867	4.2450	11.9923	.0463	13.7164
2	10	0	.5373	.0350	4.1353	0	2.4287	.0047	1.8116
1	15	6.6306	3.3581	.4053	19.6060	6.1563	14.5346	.0481	9.2610
2	15	0	1.1599	.0477	5.4230	0	4.0714	.0059	2.0790
1	5	2.0265	.9736	.3243	26.6756	1.7676	5.7175	.0370	22.4779
2	5	0	.2288	.0229	1.7748	0	.9886	.0026	.7764
1	7	3.1063	1.6371	.3560	24.9006	2.7768	8.6334	.0419	18.5479
2	7	0	.5210	.0323	2.5530	0	1.9036	.0038	.8694
1	10	4.7076	2.4207	.3850	22.4867	4.2450	11.9923	.0463	13.7164
2	10	0	.7796	.0401	3.8879	0	2.9169	.0050	1.3230
1	15	4.7076	2.4207	.3850	22.4867	4.2450	11.9923	.0463	13.7164
2	15	0	.1034	.0177	4.5865	0	.5825	.0020	3.6605
1	5	6.6306	3.3581	.4053	19.6060	6.1563	14.5346	.0481	9.2610
2	5	0	.2529	.0250	6.3527	0	1.2336	.0031	4.9196
1	7	6.6306	3.3581	.4053	19.6060	6.1563	14.5346	.0481	9.2610
2	7	0	.5393	.0350	6.0583	0	2.4287	.0047	3.7229

FOOTNOTES:

¹ Based on the assumption of one admission per day of the specified classification of patients during the first period of estimate (and none thereafter). Derived from the complete hospitalization and evacuation experience of all US Army WIA and DNBI patients admitted to hospitals in the Korean Conflict and all US Army DNBI cases admitted to hospitals in any overseas area during the same period.

² Thirty days each.

³ Accumulation of patients at end of period.

⁴ Return to duty dispositions during the period.

⁵ Died in hospital dispositions during the period.

⁶ Patient evacuation dispositions out of the CZ during the period.

Table 5-8. Example for Obtaining CZ Average Daily Admissions

Daily Patient Classification	Current Period (30 days)	Evacuation Policy (days)	Average Daily Strength (1000s)	Admission Rate	Total
WIA					
Divisional and nondivisional combat troops	1	7	56	$\times 1.54 =$	86.24
Nondivisional support troops	1	7	20	$\times .28 =$	5.60
			Total		91.84
DNBI					
Divisional and nondivisional combat troops	1	7	56	$\times 2.41 =$	134.96
Nondivisional support troops	1	7	20	$\times 1.87 =$	37.40
			Total		172.36

Table 5-9. Example for Finding Accumulation Factors

Patient Classification	Period of Estimate (30 days)	Evacuation Policy (days)	Accumulation Factors
WIA	1	7	3.1063
			0
DNBI	1	7	2.7768
			0

Table 5-10. Example for Obtaining Total CZ Patients Remaining (Period 1)

Patient Classification	Period of Estimate (30 days)	First Period Accumulation Factor	Average Daily Admission	Total CZ Patients Remaining at End of Period 1
WIA	1	3.1063	$\times 91.84 =$	285.28
DNBI	1	2.7768	$\times 172.36 =$	478.61

Table 5-12. Example for Obtaining Total Patients Remaining in CZ Hospitals (Period 1)

Patient Classification	Period 1
WIA	285.28
DNBI	478.61
TOTAL	763.89

Table 5-11. Example for Obtaining Total CZ Patients Remaining (Period 2)

Patient Classification	Period of Estimate (30 days)	First Period Accumulation Factor	Average Daily Admission	Total CZ Patients Remaining at End of Period 2
WIA	1	0 ¹	$\times 91.84 =$	0
DNBI	1	0 ¹	$\times 172.36 =$	0

Table 5-13. Example for Obtaining Total CZ Bed Requirements (Period 1)

Total patients remaining in CZ hospitals	Period 1
CZ dispersion factor	763.89
CZ bed requirements at end of first 30-day period	$\times 1.33$
	1,016

FOOTNOTE:

¹This example is to show process only. Since this is a zero, computation is not necessary.

5-23. METHODOLOGY FOR THE COMMUNICATIONS ZONE.

a. Using Tables 5-3, 5-6, 5-14, and 5-15 (or appropriate actual figures), select the COMMZ population to be served according to expected admission experience, the number of 30-day periods, and the evacuation policies for each period. Note that this has already been done for the combat zone; therefore, only the COMMZ population is considered in this calculation. The

process for determining hospital beds required in the COMMZ is described in paragraphs 5-23b, c, and d below.

b. Perform (1) through (5) below for WIA patients and then again for DNBI patients (for the population to be served in the COMMZ).

(1) Use the example problem as shown in Table 5-3 (or appropriate actual figures) to obtain the total average

daily theater admissions (WIA or DNBI) for the current period estimate. Multiply the average daily strength (for each population served) by the corresponding admission rate (per 1,000 troops). Note that a total for the CZ has already been obtained. Check numbers obtained for correctness with those numbers shown in the example solution in Table 5-14. Note that in Table 5-6 the totals reflected are broken down by patient classifications (WIA/DNBI) and not by the type of troop population.

Table 5-14. Example Calculations of CZ Hospital Bed Requirements

Theater average daily admissions					Theater accumulation factors for consecutive periods				Theater patients remaining at end of consecutive periods				
Patient class	Current period	Evac policy	CZ troops	COMMZ troops	Total	1	2	3	4	1	2	3	4
WIA	1	30	91.84	1.00	92.84	15.0607	0	0	0	1,398.24	0	0	0
	2	30	91.84	1.00	92.84		15.0607	2,6179	0		1,398.24	243.05	0
	3	60	375.48	1.50	376.98			20.5087	4,4283			7,731.37	1,669.38
	4	60	375.48	1.50	376.98				20.5087				7,731.37
DNBI	1	30	172.36	19.00	191.36	10.8494	0	0	0	2,076.14	0	0	0
	2	30	172.36	19.00	191.36		10.8494	0.9543	0		2,076.14	182.61	0
	3	60	399.66	28.50	428.16			12.9982	1.6680			5,565.31	714.17
	4	60	399.66	28.50	428.16				12.9982				5,565.31
All patients remaining in the theater													
All patients remaining in the combat zone hospitals (from population served)													
All patients remaining in the communications zone hospitals (from the population served)													
COMMZ dispersion factor (1.25) (allowance = 20%)													
COMMZ bed requirements at end of each 30-day period													
<div><div><div>3,474.38</div><div>− 763.89</div><div>2,710.49</div><div>× 1.25</div><div>3,388</div></div><div><div>3,474.38</div><div>− 763.89</div><div>2,710.49</div><div>× 1.25</div><div>3,388</div></div><div><div>13,722.34</div><div>− 4,950.09</div><div>8,772.25</div><div>× 1.25</div><div>10,965</div></div><div><div>15,680.23</div><div>− 4,950.09</div><div>10,730.14</div><div>× 1.25</div><div>13,413</div></div></div>													

CONSIDERATION:

- Actual numbers for the above example numbers must be substituted when calculating actual operational bed requirements.

Table 5-15. Example Accumulation and Disposition Factors — Theater¹

Periods of estimate²	Evacuation policy (days)	Accumulation³	Wounded in action		Disease/nonbattle injuries				
			Return to duty⁴	Died in hospitals⁵	Return to duty⁴	Died in hospitals⁵			
1	15	9.5249	3.3581	.4053	16.7117	7.4828	14.5346	.0481	7.9345
2	5	0	1.1599	.0477	8.3173	0	4.0714	.0059	3.4055
1	30	15.0607	4.6585	.4146	9.8662	0.8494	16.1905	.0493	2.9108
2	30	0	4.5875	.0684	10.4048	0	7.6175	.0077	3.2242
1	60	20.5087	4.6586	.4146	4.4182	12.9982	16.1905	.0493	.7620
2	60	4.4283	8.5607	.0763	7.4434	1.6680	9.5856	.0108	1.7338
3	60	0	3.0858	.0971	1.3354	0	1.2479	.0029	.4172
1	15	9.5249	3.3581	.4053	16.7117	7.4828	14.5346	.0481	7.9345
2	30	0	2.7310	.0377	6.7362	0	5.6336	.0088	1.8424
1	15	9.5249	3.3581	.4053	16.7117	7.4828	14.5346	.0481	7.9345
2	60	1.8227	3.9242	.0597	3.7184	.6372	6.1329	.0076	.7051
3	60	0	1.1526	.0030	.6671	0	.4665	.0010	.1697
1	30	15.0607	4.6585	.4146	9.8662	10.8494	16.1905	.0493	2.9108
2	60	2.6179	6.6269	.0725	5.7434	.9543	8.6518	.0093	1.2340
3	60	0	1.5839	.0036	1.0304	0	.6558	.0015	.2969
1	30	15.0607	4.6585	.4146	9.8662	10.8494	16.1905	.0493	2.9108
2	15	0	1.1599	.0477	13.8531	0	4.0714	.0059	6.7721
1	60	20.5087	4.6585	.4146	4.4182	12.9982	16.1905	.0493	.7620
2	15	0	1.1599	.0477	19.3011	0	4.0714	.0059	6.7721
1	60	20.5087	4.6585	.4146	4.4182	2.9982	16.1905	.0493	.7620
2	30	0	4.5875	.0684	15.8528	0	7.6175	.0077	5.3730

FOOTNOTES:

¹ Based on the assumption of one admission per day of the specified classification of patients during the first period of estimate (and none thereafter). Derived from the complete hospitalization and evacuation experience of all US Army MIA and DNB1 patients admitted to hospitals in the Korean Conflict and all US Army DNB1 cases admitted to hospitals in any overseas area during the same period.

² Thirty days each.

³ Accumulation of patients at end of period.⁴ Return to duty dispositions during the period.

⁵ Died in hospital dispositions during the period.

⁶ Patient evacuation dispositions out of the CZ during the period.

(2) Note that the period of estimate numbered "1" in Table 5-14 corresponds to the current period of estimate in Table 5-15. Locate the appropriate accumulation factor column (WIA or DNBI) in Table 5-15 by noting the theater evacuation policy for that current period of estimate. Various combination sets of evacuation policies are identified. For subsequent consecutive periods, locate the appropriate evacuation policy combination which applies to your particular problems. Table 5-17 illustrates the process used to find the theater accumulation factor for period 1.

(3) Using the example solution in Table 5-14 (or appropriate actual figures), obtain the number of cur-

rent period admissions (WIA and DNBI) that are still remaining in theater hospitals at the end of the current period by multiplying the first accumulation factor by the theater's total average daily admissions in the current period. Table 5-18 illustrates the process used to obtain the number of theater patients admitted during and remaining at the end of period 2.

(4) Obtain the number of current period admissions (WIA or DNBI) that are still remaining in theater hospitals at the end of the next period by multiplying the second accumulation factor by the theater's total average daily admissions in the current

period. Care must be exercised to select the proper combination of evacuation policies reflecting current and consecutive period accumulation factors. Whatever period of estimate you are computing becomes the first period and subsequent periods become 2 and 3, respectively. Continue this process for patients remaining at the end of other successive periods until all nonzero accumulation factors have been used. In Table 5-14, the 30-day period (period 2), followed by a 60-day period (period 3), has a subsequent period additional accumulation factor of 2.6179 (WIA) and 0.9543 (DNBI) from the sixth combination in Table 5-15. (Table 5-19 illustrates the process used to obtain the number of theater patients remaining at the end of period 3.)

Table 5-16. Example for Obtaining Theater Average Daily Admissions

Patient Classification	Current Period (30 days)	Evacuation Policy (days)	Average Daily Strength (1,000s)	Admission Rate	Total
WIA	1	30	20	× .05	= 1.00
DNBI	1	30	20	× .95	= 19.00
Theater					
Daily Average Admissions					
		WIA	DNBI		
CZ Total		91.84	172.36		
COMMZ Total		1.00	19.00		
Theater Total		92.84	191.36		

Table 5-18. Example for Obtaining Total Theater Patients Remaining (Period 2)

Patient Classification	Period of Estimate (30 days)	First Period Accumulation Factor	Total Average Daily Admissions	Theater Patients Remaining at End of Period 2
WIA	2	15.0607 ×	92.84 ¹	= 1398.24 ²
DNBI	2	10.8494 ×	191.36 ¹	= 2076.14 ²

FOOTNOTES:

¹Includes COMMZ and CZ figures.

²For each current period you evaluate, you define what happens in it and in subsequent time periods. The next step gives an example of theater patients remaining in subsequent time period 3.

Table 5-17. Example for Finding Theater Accumulation Factors

Patient Classification	Period of Estimate (30 days)	Evacuation Policy (days)	Accumulation Factors
WIA	1	30	15.0607
DNBI	1	30	10.8494
			0

Table 5-19. Example for Obtaining Total Theater Patients Remaining (Period 3)

Patient Classification	Period of Estimate (30 days)	First Accumulation Factor	Total Theater Average Daily Admissions	Theater Patients Remaining at End of Period 3
WIA	2	2.6179 ×	92.84	= 243.05
DNBI	2	.9543 ×	191.36	= 182.61

(5) Using the example solution shown in Table 5-14 (or appropriate actual figures), add current period admissions that are still remaining in theater hospitals at the end of successive periods of estimate with any previous admissions still remaining in theater hospitals at the end of the same successive periods. DNBI results, as they are obtained, should be added at this point with WIA results to obtain total patients remaining in theater hospitals. (Table 5-20 illustrates the process used to obtain the total patients remaining in theater hospitals for period 1.)

c. Using the example solution shown in Table 5-14 (or appropriate actual figures), obtain total patients remaining in COMMZ hospitals at the end of each successive period of estimate as follows: for each period, subtract patients remaining in CZ hospitals from all patients remaining in theater hospitals (that is, subtract the final results from the corresponding results of (5) above). If CZ hospital bed requirements are not calculated first, the CZ accumulation factors can be obtained from theater factors in Table 5-15 by subtracting equivalent CZ factors in Table 5-6 before calculating

beds as in the sample in Table 5-14. Table 5-21 illustrates the process used to obtain the total patients remaining in COMMZ hospitals for period 1.

d. Obtain the COMMZ bed requirements at the end of each consecutive period of estimate as follows: multiply the results of paragraph 5-23c, above, by the COMMZ dispersion factor (as shown in Table 5-3). Table 5-22 illustrates the process used to obtain total COMMZ bed requirements for period 1.

Table 5-20. Example for Obtaining Total Patients Remaining in Theater Hospitals (Period 1)

Patient Classification	Period 1
WIA	1,398.24
DNBI	+ 2,076.14
Total patients remaining in theater hospitals	3,474.38

Table 5-21. Example of Obtaining Total Patients Remaining in COMMZ Hospitals

Total patients remaining in theater	3,474.38
Patients in CZ hospitals	-763.89
Patients remaining in COMMZ hospitals	2,710.49

Table 5-22. Example for Obtaining Total COMMZ Bed Requirements

Patients remaining in COMMZ hospitals	2,710.49
Dispersion factor	X 1.25
COMMZ bed requirements at end of Period 1	3,338.10

5-24. METHODOLOGY FOR THE CONTINENTAL UNITED STATES.

a. This methodology is presented to show how the conditions within the theater of operations impact on bed requirements for CONUS. Some examples of these conditions are battle intensity, strengths, and evacuation policy. Using Tables 5-3, 5-14, 5-23, and 5-24, categorize the total hospitalization system population served according to expected admission experience. Note that categories have already been developed for that portion of the system's population residing in the theater (paragraph 5-21a). Normally, a medical planner is only concerned with computing those requirements generated by operations in a particular theater. In such cases, assume there is no population to be served that resides outside the theater of interest. The process for determining hospital beds required is described in paragraphs 5-28b, c, and d, below.

b. Perform steps (1) through (4) below for WIA patients and then again for DNBI patients.

(1) Use the example problem as shown in Table 5-3

Table 5-23. Example Calculations of CONUS Bed Requirements

TOTAL SYSTEM AVERAGE DAILY ADMISSIONS					TOTAL SYSTEM ACCUMULATION FACTORS FOR SUCCESSIVE PERIODS					PATIENTS REMAINING ANYWHERE AT END OF SUCCESSIVE PERIODS				
Patient Type	Current period	Theater	CONUS	Total	1	2	3	4	1	2	3	4		
WIA	1	92.84	0	92.84	24.9269	16.2899	11.1763	8.5651	2,314.21	1,512.35	1,037.61	795.18		
	2	92.84	0	92.84		24.9269	16.2899	11.1763		2,314.21	1,512.35	1,037.61		
	3	376.98	0	376.98			24.9269	16.2899			9,396.94	6,140.97		
	4	376.98	0	376.98				24.9269				9,396.94		
DNBI	1	191.36	0	191.36	13.7602	4.1615	2.1701	1.3283	2,633.15	796.35	415.27	254.18		
	2	191.36	0	191.36		13.7602	4.1615	2.1701		2,633.15	796.35	415.27		
	3	428.16	0	428.16			13.7602	4.1615			5,891.57	1,781.79		
	4	428.16	0	428.16				13.7602				5,891.57		
All patients anywhere									4,947.36	7,256.06	19,050.09	25,713.51		
All patients remaining in theater									-3,474.38	-3,474.38	-13,722.34	-15,680.23		
All patients remaining in CONUS									1,472.98	3,781.68	5,327.75	10,033.28		
CONUS dispersion factor: 1.11 (allowance = 10%)									x 1.11	x 1.11	x 1.11	1.11		
CONUS bed requirements at end of each 30-day period									1,635	4,198	5,914	11,137		

CONSIDERATION:

- The above example numbers must be substituted with actual numbers when calculating actual operational bed requirements.

(or appropriate actual figures). Obtain total average daily worldwide system admissions for the current period of estimate by multiplying the average daily strength (in thousands) of each category of population by the corresponding admission rate and then by summing the results for all population categories. Note that worldwide system subtotals (theater totals) have already been obtained (paragraph 5-27b(1)). Also note that CONUS is only serving requirements generated by this theater (see Table 5-23).

(2) Note that the period of estimate numbered "1" in Table 5-24 corresponds to the current period of estimate in Table 5-23. Since an evacuation policy is not applicable to the total hospitalization system, Table 5-24 need only provide a single column of accumulation factors for each patient type.

(3) Obtain the estimate of current period admissions remaining in hospitals anywhere at the end of the current period by multiplying the first accumulation factors by the worldwide system's total average daily admissions in the current period. Obtain the es-

timate of current period admissions remaining in hospitals anywhere at the end of the next period by multiplying the second accumulation factor by the worldwide system's total average daily admissions in the current period. Continue this process for patients remaining at the end of all subsequent periods.

(4) Accumulate current period admissions still remaining in hospitals anywhere at the end of the various periods of estimate with all previous admissions still remaining at the end of the corresponding periods. Note that DNBI results, as they are obtained, should be added here to WIA results.

c. Obtain the total number of patients remaining in CONUS hospitals at the end of each period of estimate as follows: for each period, subtract patients remaining in theaters from all patients remaining anywhere.

d. Obtain the CONUS bed requirements for each period of estimate as follows: multiply the results of paragraph 5-24c, above, by the CONUS dispersion factors (1.11).

Table 5-24. Accumulation and Disposition Factors, Total Hospitalization System¹

Period of estimate ²	Accumulation ³	TOTAL HOSPITALIZATION SYSTEM ACCUMULATION AND DISPOSITION FACTORS			DISEASE/NONBATTLE INJURIES		
		WOUNDED IN ACTION	DIED IN ACTION	DISABILITY	WOUNDED IN ACTION	DIED IN ACTION	DISABILITY
		Return to duty ⁴	Died in hospitals ⁵	Discharge ⁶	Return to duty ⁴	Died in hospitals ⁵	Discharge ⁶
1	24.9269	4.6585	.4146	0	13.7602	16.1905	.0493
2	16.2899	8.5607	.0763	0	4.1615	9.5856	.0108
3	11.1763	5.0915	.0161	.0060	2.1701	1.9687	.0038
4	8.5651	2.5657	.0107	.0348	1.3283	.8071	.0021
5	7.0059	1.4791	.0033	.0768	.8922	.3928	.0021
6	5.8345	1.0709	.0010	.0995	.6309	.2164	.0011
7	4.9412	.7668	0	.1265	.4520	.1328	.0028
8	4.2085	.5716	.0006	.1605	.3252	.0827	.0009
9	3.5763	.4302	.0024	.1996	.2344	.0527	.0021
10	3.0439	.3252	.0009	.2063	.1713	.0353	0
11	2.5614	.2512	.0021	.2292	.1226	.0241	0
12	2.1526	.1926	0	.2162	.0931	.0141	0

FOOTNOTES:

¹ Based on the assumption of one admission per day of the specified classification of patients during the first period of estimate (and none thereafter). Derived from the complete hospitalization and evacuation experience of all US Army WIA and DNBI patients admitted to hospitals in the Korean Conflict and all US Army DNBI cases admitted to hospitals in any overseas area during the same period.

² Thirty (30) days each.

³ Accumulation of patients at end of period.

⁴ Returns to duty during the period.

⁵ Deaths in hospitals during the period.

⁶ Disability discharges during the period.

5-25. NUCLEAR, BIOLOGICAL, AND CHEMICAL OPERATIONS. While the preceding computations afford a relatively sound basis for determining bed requirements, NBC operations introduce other factors. The experience factors in this chapter have been derived in the presence of a certain pattern of wounding. They are related to average admission rates over long periods in conventional warfare. The types of wounds and illnesses introduced by NBC munitions will significantly alter accumulation factors. There may also be very wide fluctuations in daily admission rates resulting from these munitions. This scenario may preclude any attempt to employ average admission rates. The problem will be one of handling recurring peak loads of patients. This problem must be met either by more intensive use of theater hospital facilities,

by instituting mass casualty standards for care, or by rapid and extensive evacuation to the CONUS. For this reason, the planner may find it more realistic to submit bed requirements as a percentage of troop strength supported and build the maximum flexibility into the supporting health service support system.

5-26. ESTIMATION OF ENEMY PRISONER OF WAR BED REQUIREMENTS. Bed requirements for the total prisoner of war patient load can be estimated grossly on the basis of 4 percent of the total prisoner of war population at any given time multiplied by the appropriate dispersion factor. The dispersion factor would, however, be small since the prisoner of war population is homogeneous and the geographic considerations favor stability of location. The proportion

of total bed requirements that are made available for specialized care will depend upon local conditions. Provision is made for specialized treatment beds on the basis of medical intelligence reports of morbidity among enemy troops, diseases endemic to the area of operations, and type of injuries and wounds resulting from the tactical situation (see Tables 5-5a through 5-5h). Wounded EPWs will be treated at the nearest MTF commensurate with established command policy.

5-27. CHANGES IN EVACUATION POLICY. Oscillating changes in the evacuation policy affect hospital bed requirements. The number of days specified for a level of hospitalization includes the number of days the patient spends in hospitals at lower levels. See Table 5-25 for the effects of reducing this policy.

Table 5-25. Effects of Reduction in Theater Evacuation Policy on Bed Requirements in CONUS

Type Casualty	60-Day		30-Day		Admission Difference		Rate ²		Avg. Theater Strength (1,000s)	Patients
	Evac Policy		Evac Policy							
DNI	13.00 ¹		Less 10.85 ¹	=	2.15	×	1.36	×	500	= 1,462
WIA	20.50 ¹		Less 15.06 ¹	=	5.45	×	0.55	×	500	= 1,499
Total patients =										2,961
20% dispersion allowance =										× 1.25
Total additional beds required =										3,701

FOOTNOTES:

¹Accumulation factors from Table 5-14. (Figures have been rounded up.)

²Admission rates from Table 5-24.

CHAPTER 6

OPERATIONAL FORCE REQUIREMENT PLANNING

6-1. INTRODUCTION.

a. Combat service support (CSS) planning consists of two major planning areas—force development and force deployment. Force development is concerned with the building of a CSS force structure which will adequately support tactical operations. Force deployment is concerned with the time-phased movement of the CSS force, its accompanying supplies and equipment, and necessary resupply and personnel replacement from the continental United States (CONUS) or other origins to the area of operations.

b. The mission, character, disposition, and capabilities of the enemy; the characteristics of the area of operations (to include terrain, climate, population, natural resources, and manmade works); the availability of troops and/or units; and the availability of transportation, supplies, and equipment determine the number and types of units for employment in a given operation.

c. This chapter is a guide for operational force requirement planning which includes —

- Combat service support (CSS) for force development.
- Planning procedures.
- Designing the combat service support structure.
- Combat service support force development.

6-2. CSS FORCE DEVELOPMENT.

a. Force development planning includes estimating personnel and equipment requirements to accomplish a mission based on tactical/strategic and logistics concepts and intelligence. Such planning normally conforms to the personnel strength ceiling authorized

the theater and subordinate commands. Personnel and equipment are authorized for units in a command by The Army Authorization Document System (TAADS) (AR 310-49), which also provides the means to maintain total authorizations in the command. Planning guidance on units available to meet force requirements is given in Joint Chiefs of Staff (JCS) Publication 2, Volume II. These documents provide the centralized information needed for CSS force development planning.

b. The force planner must continually analyze requirements and ensure that the force list for any operation meets its operational requirements and that it consists of the minimum essential manpower and equipment to accomplish the mission.

c. Variable factors that influence CSS force requirements include —

- Number and types of troops to be supported, their mission, and the extent of CSS to be provided.
- Quantity, types, and distribution of equipment.
- Level of support to be provided.
- Maintenance policy.
- Construction and Real Property Maintenance Activities (RPMA) requirements.
- Climate and terrain.

• Status and availability of local resources in the area of operations.

- Size of the area of operations.
- Attitudes, availability, and capabilities of local civilians and prisoners of war (PWs).

- Availability, capabilities, and limitations of CSS units.

- Enemy capabilities.
- Needs of the inhabitants of the area which must be met from military stocks.
- Medical evacuation policy.
- Authorized stockage levels.

d. The following steps are essential to sound force development planning:

- Determining tasks and resources.
- Determining workloads based on quantitative considerations.
- Selecting types of units with required capabilities.
- Calculating the number of units required, including type B units (type B units are units with a certain percentage of military spaces filled by civilian personnel).
- Making provisions for command control.
- Determining desired time-phased arrival of units at their destination.
- Selecting specific troop units to fill the force requirements.

e. Troop basis planning is not absolutely predictable. Planners must consider an infinite variety of operational environments and the vital role of human factors which may complicate analysis and/or justification.

f. Within the troop ceiling, planners coordinate force requirements to achieve a balanced force that can perform the mission. Troop ceilings are fixed limits on force strength to include authorized strength on manning documents, patient, transient, and temporary duty (TDY) spaces. Therefore, a change in the requirements of one agency requires adjustments among other agencies. When a change has been justified as a result of detailed planning, the Department of the Army (DA) may change a troop ceiling.

6-3. PLANNING PROCEDURES.

a. Force planning passes through the three phases of estimation, calculation, and modification. The planner must accomplish the first phase, particularly in the case of the establishment of a new theater with few, if any, tangible figures. He develops each successive phase with more concrete and accurate data than are available in the preceding phase until a balanced, sound troop list evolves.

(1) Estimation. The planner must accomplish the initial step in the development of troop requirements with little specific data — often no more than a brief statement of the overall strength of the force to be employed or the number of divisions around which the force is to be built. Each planner uses broad experience factors, such as division force equivalents, troop and equipment densities, and replacement and consumption factors.

(2) Calculation. This phase includes the following steps:

(a) Phase II planning begins when the planner receives phase I estimates in the form of initial, tentative troop lists. These troop lists should be more accurate than the estimates used to initiate planning in phase I. The margin of error between these initial lists and those finally accepted will depend on the adequacy of the planning factors and guidance available to the troop requirement planners, and the experience and judgment of the individual planner. At the review level, general staff planning officers should

carefully examine lists of the arms and services to determine whether the lists comply with guidance provided in the campaign plan scenario. In cases where branch strength requirements are largely dependent on total force strength, these planners should question any significant deviation from currently accepted percentages. However, environmental conditions, cultural development, and periods of time available for the buildup, to include force deployment and base development, are seldom identical in the different campaign scenarios. Certain types of troop strength requirements are highly sensitive to factors other than total force in the theater. For example, a given campaign plan scenario indicates that peak requirements for logistics support of operations will occur at a particular phase of the campaign, i.e., on initiation of the offensive at D + 90 days. Presumably, the airfields, roads, ports, terminals and storage, maintenance, and other facilities needed to maintain the planned volume of logistics support will require approximately 12 construction battalion (CB) months to accomplish. If work were to start on D-day, four engineer CBs could do the work if they were in the theater. However, if the battalions were scheduled for deployment into the theater at 10-day intervals starting at D+10 days, the task would require eight engineer CBs.

(b) Each planner reviews the consolidated initial troop list and then he decides, based on the new information therein, whether his next revision will increase or decrease the force and to what extent these changes will be made. The general staff planning officers should appraise each planner's predictions for accuracy and recalculate the first revised troop list accordingly. The general staff planning officers then furnish this information to all other planners so that each will be aware of the direction and limits of applicable changes.

(c) When this information is available, the planners continue phase II planning by preparing revised estimates. They discard the division force equivalent and other factors suitable only for initial estimation in favor of actual (or adjusted) figures extracted from the initial lists. They may make several

revisions before they can balance lists with one another. Intelligent adjustment and careful prediction at each successive planning stage reduce the number of revisions necessary to arrive at a calculated, balanced troop list to complete phase II.

(3) Modification. This phase involves the following:

(a) The consolidated troop list produced in phase II provides a balanced force, each element of which can perform its mission without modification. The planner then applies the modifications, adaptations, or alterations that policy, command direction, or conditions peculiar to the theater under consideration dictate in phase III. For example, the planner may substitute indigenous labor for military personnel at this stage. This action will throw the developed troop list out of balance, possibly requiring several successive revisions, such as those made in phase II, to balance it. This substitution will affect various services differently; i.e., the impact on maintenance units will be relatively minor because the equipment density will not change significantly, but the impact on the medical troop list will be substantial because medical support is provided primarily on the basis of military strength. Other services will be affected to a greater or lesser extent, depending on the change in military strength and the equipment required. Because substitution of indigenous labor for military personnel in phase III will cause an imbalance and make additional revisions necessary, the planner should consider making such substitutions earlier in the planning process. Earlier substitution will simplify matters for some services (such as medical services) interested primarily in military strengths, but it will complicate matters for those services that must prepare lists of equipment for the indigenous labor force. The chief of the planning group decides the procedures, but the various CSS representatives should present the advantages and disadvantages of each method and make an appropriate recommendation in each case. A 100-percent military troop list against which planners can make augmentations and comparisons is desirable.

(b) Planners frequently impose arbitrary personnel ceilings on the CSS elements. Planners should not apply these ceilings until phase III because the reduction in strength may not be proportional for all services or for all units within a service. If the planner knows the full military strength required to accomplish a mission, he can adequately appraise the effects of a reduced strength and report them to the head of the planning staff and force commander.

(c) The planner makes final distribution of troops by zone or area and determines the location of service areas and other major installations in phase III. If the planner has tentatively accomplished the foregoing for each troop list prepared in phases I and II, he should find the final determination is simple because of his increasing awareness of the deployment of troops of other arms and services throughout the theater and his adjustment of his own distribution to meet the probable load.

6-4. DESIGN OF THE CSS STRUCTURE.

a. The company is the normal basic organizational unit for CSS organizations. With few exceptions, there are no fixed organizations above this level. Normally, the company is self-sufficient in that it possesses the necessary organizational, administrative, and logistics capability. Companies can provide elements to support units for short periods of time. Cellular detachments and teams provide special capabilities when required and receive any organizational support necessary from the larger units to which they are assigned or attached. Units are organized to function to the maximum degree in either the combat zone (CZ) or the communications zone (COMMZ). Headquarters units serve as command and control elements for assigned and attached units that are selected in the required number and with the necessary capabilities to best meet the operational situation.

b. Flexibility in CSS organizations is essential to meet the full range of tasks that may arise. The force planner designs the CSS structure to accomplish the support mission in the most efficient and responsive manner. Use of company-sized units in this manner is

known as the "building-block" principle and is a fundamental technique in developing CSS organizations.

c. An important application that illustrates the building block principle is found in the corps support command (COSCOM). COSCOM operations, organization, and capabilities are the composite of the CSS activities performed by the separately organized table of organization and equipment (TOE) units that may be assigned or attached. In general, each of the various headquarters, companies, detachments, and cellular organizations is designed to perform a given workload in specific areas of CSS. These separate units, with proper adjustment to ensure self-sufficiency, can be used to support organizations of less than division size. Battalion, group, and brigade headquarters are added when the CSS structure expands.

d. The TOEs of the various CSS units express unit capabilities in quantitative terms and provide a ready reference for determining an appropriate CSS force list. To tailor any CSS force organization to meet the needs of the supported commander, the total CSS requirement must then be compared against the unit capability of the appropriate CSS unit to determine the CSS force requirement. The TOE mission and capability of CSS units to meet these requirements can be found in Volume I of this FM for divisional CSS units and in FM 101-10-2 for nondivisional CSS units.

6-5. CSS FORCE DEPLOYMENT.

a. Force deployment planning is that part of the force planning in which the consolidated force list is expanded into a time-phased force deployment list (TPFDL). This entails the sequencing of the consolidated force list by required delivery date (RDD) at destination, the selection of the port of debarkation (POD) and the lift mode to POD for each force entry, the reckoning of the earliest and latest arrival data at POD, and the determination of priority among force increments within RDD. While the supported commander reviews, refines, integrates, and consolidates force deployment data and produces the final TPFDL, it is the Army component commanders

who provide the detailed data inputs. Concurrent with the detailed development of the TPFDL, the supporting commanders provide their command unique force data and are frequently in a position to contribute timely advice which may aid in the resolution of problems involving conflicting requirements for limited lift resources and mobility support facilities. Deployment planning begins as soon as the major combat force list is approved by the supported commander. It is conducted concurrently with the development of the combat support and combat service support force list and ends with the production of the consolidated TPFDL.

b. Force deployment planning includes the following objectives:

- To establish a basis for the orderly and timely buildup of the balanced force at planned destinations in light of the concept of operations.
- To identify the magnitude of the force movement requirements.
- To identify the impact of force movement and forward positioning on facilities and resources.
- To contribute plan-unique data for use in support planning, base development planning, and transportation planning.

c. Force deployment planning requires consideration of the elements discussed below.

(1) Lift mode to POD selection. The selected lift mode serves to identify the desired type of transportation to be used to move the force unit or increment between a point of origin and the POD. The mode selected (air, land, or sea) is determined by the physical nature of the lines of communication (LOC), unit movement characteristic data, lift resource availability, and a variety of other planning factors.

(2) Port of debarkation selection. The POD is the terminal or geographic area to which a given force unit or increment will be moved. It may be in or near a

staging base or assembly area, it may be a location in the area of operations at which strategic movement stops and tactical movement begins, or it may be the ultimate destination of the force being addressed. POD serves to identify the offload point at which the strategic movement of a force unit or increment ends. Force units or increments which require no strategic movement normally will not require the identification of a POD.

(3) Earliest and latest arrival date at POD. The earliest and latest arrival date at POD is related to the RDD at destination. It is governed by time and distance factors from POD to destination, staging and assembly factors, and the capacity of the responsible commander in the area of operations to receive and accommodate forces in transit. The time spread between earliest and latest arrival dates may impact heavily on transportation scheduling and could be a critical limiting factor in strategic movement flexibility.

(4) Priority of force arrival. Availability of transportation resources and throughput capacity of a POD can be a critical limiting factor in transportation planning and scheduling. The priority assigned is keyed to the nature of the requirement for a force unit or increment as determined from the concept of operations, and it governs the sequence of arrival of the force unit or increment within the date required for delivery at the POD. The priority assigned serves to assist in the evaluation and refinement of the movement program.

(5) TPFDL production. The production of valid time-phased force deployment data which are keyed to the concept of operations of the supported commander is the ultimate objective of deployment planning. Figure 6-1 contains an example of a TPFDL format.

CLASSIFICATION

HEADQUARTERS,
APO
1 July 1986

TIME-PHASED FORCE DEPLOYMENT LIST (U)

Instructions for completion:

- (1) Force Requirement Number—The unique alphanumeric identifier of each force entry.
- (2) Unit Type Code—Only UTC promulgated in accordance with JCS Pub 6, volume II, part 6, chapter 3, will be used.
- (3) Parent Service—The parent service of the force.
- (4) Force Description—Free-form description of the type and level of the force.
- (5) Personal Strength—Enter strength figure associated with the assigned UTC; where no strength figure is associated with the UTC, enter a strength estimate.
- (6) Unit Level Code—The ULC associated with the assigned UTC.
- (7) Source—The headquarters designated in appropriate allocation documents to provide the force.
- (8) Mode to Port of Debarcation—Enter the preferred transportation mode for movement of the force to the POD.
- (9) POD or Area of Operations—The specific geographic location of the POD, including the country name or area of operations for forces which do not embark.
- (10) Required Date (POD)—The latest date by which this force, or significant elements thereof, must arrive at the POD and complete unloading.
- (11) Priority—The desired sequence of arrival within the data required for delivery at the POD.

Figure 6-1. TPFDL Format

APPENDIX

PLANNING FACTORS WORKSHEETS

PURPOSE. This appendix provides factors worksheets to assist planners in determining unit assumptions or requirements. These worksheets are interrelated with the planning factors located in this manual and they provide the planner with a systematic methodology. Use of these worksheets should decrease the time that is spent on “number crunching” and should allow more time for analysis.

WORKSHEET A:	Estimate of Daily Personnel Losses/Status
WORKSHEET B:	Distribution of Losses
WORKSHEET C:	Estimate of Daily Ammunition Requirements
WORKSHEET D:	Fuel Consumption
WORKSHEET E:	Fuel—Part A
WORKSHEET F:	Fuel—Part B
WORKSHEET G:	Estimate of Daily Equipment Losses/Status
WORKSHEET H:	Supply

Worksheet A
ESTIMATE OF DAILY PERSONNEL LOSSES/STATUS

ROW	ITEM	SOURCE/COMPUTATION	D + _____	D + _____	D + _____	D + _____	D + _____
1	PARENT UNIT AUTHORIZED STRENGTH	MTOE/FM 101-10-1/2 LINE 1 PREVIOUS DAY					
2	ATTACHED UNIT(S) AUTHORIZED STRENGTH	MTOE/FM 101-10-1/2 UNIT(S) ATTACHED DURING RPT PERIOD					
3	DETACHED UNIT(S) AUTHORIZED STRENGTH	MTOE/FM 101-10-1/2 UNIT(S) DETACHED DURING RPT PERIOD					
4	TOTAL AUTHORIZED STRENGTH	SUM OF ROWS 1 AND 2 MINUS ROW 3					
5	PARENT UNIT PRESENT FOR DUTY STRENGTH	PDS REPORT OR ROW 14 FROM PREVIOUS DAY					
6	ATTACHED UNIT(S) PRESENT FOR DUTY STRENGTH	PDS REPORT FOR UNIT(S) ATTACHED DURING RPT PERIOD					
7	DETACHED UNIT(S) PRESENT FOR DUTY STRENGTH	PDS REPORT FOR UNIT(S) DETACHED DURING RPT PERIOD					
8	TOTAL PRESENT FOR DUTY STRENGTH	SUM OF ROWS 5 AND 6 MINUS ROW 7					
9	LOSS RATE	FM 101-10-1 LOSS FACTOR DIVIDED BY 100					
10	TOTAL LOSSES	ROW 8 TIMES ROW 9					
11	REPLACEMENTS	HIGHER HEADQUARTERS S1/G1/AG/DCSPER					
12	HOSPITAL RETURNS	SURGEON FM 101-10-1					
13	NET LOSSES	ROW 10 MINUS THE SUM OF ROWS 11 AND 12					
14	END OF DAY PRESENT FOR DUTY STRENGTH	ROW 8 MINUS ROW 13					
15	END OF DAY PERCENT OF AUTHORIZED STRENGTH	ROW 14 DIVIDED BY ROW 4					

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FM 101-10-1

Worksheet B
WORKSHEET: DISTRIBUTION OF LOSSES

ROW	ITEM	SOURCE/COMPUTATION	D + _____	D + _____	D + _____	D + _____	D + _____
TOTAL LOSS BREAKDOWN							
1	TOTAL LOSSES	ROW 10 PERSONNEL WORKSHEET					
2	KIA FACTOR _____ %	KIA FACTOR TIMES ROW 1					
3	WIA FACTOR _____ %	WIA FACTOR TIMES ROW 1					
4	CAPTURED/MIA FACTOR _____ %	MIA FACTOR TIMES ROW 1					
HOSPITALIZATION STATUS							
5	NUMBER PATIENTS IN CORPS HOSPITALS BEGINNING DAY	SURGEON OR ROW 9 PREVIOUS DAY					
6	_____% HOSPITAL RETURNS BEGINNING D _____	% FACTOR TIMES ROW 5					
7	NUMBER PATIENTS REMAINING IN HOSPITALS	ROW 5 MINUS ROW 6					
8	_____% WIA EVACUATED TO CORPS HOSPITALS	% FACTOR TIMES ROW 3					
9	NUMBER PATIENTS IN CORPS HOSPITALS ENDING DAY	ROW 7 PLUS ROW 8					

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WORKSHEET: ESTIMATE OF DAILY AMMUNITION REQUIREMENTS

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Worksheet D

FUEL CONSUMPTION WORKSHEET

FUEL CATEGORY	FUEL TYPE	PARENT UNIT FUEL FACTORS (+)	ATTACHED UNITS FUEL FACTORS (-)	DETACHED UNITS FUEL FACTORS (=)	TOTAL UNITS FUEL FACTORS (x)	USAGE PROFILE (=)	TOTAL UNIT FUEL REQUIREMENTS
AB	MOGAS						
	DIESEL						
CE	MOGAS						
	DIESEL						
GN	MOGAS						
	DIESEL						
HG	MOGAS						
	DIESEL						
MH	MOGAS						
	DIESEL						
SG	MOGAS						
	DIESEL						
SV	MOGAS						
	DIESEL						
TI	MOGAS						
	DIESEL						
CC	MOGAS						
	DIESEL						
SR	MOGAS						
	DIESEL						
WV	MOGAS						
	DIESEL						
OV	MOGAS						
	DIESEL						
AV	JP-4						

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TOTAL FUEL REQUIREMENTS

MOGAS _____

DIESEL _____

JP-4 _____

Worksheet E
FUEL WORKSHEET—PART A

FUEL CATEGORY	FUEL TYPE	ATTACHED UNITS FUEL FACTORS (+)	ATTACHED UNITS FUEL FACTORS (+)	ATTACHED UNITS FUEL FACTORS (+)	ATTACHED UNITS FUEL FACTOR (+)	ATTACHED UNITS FUEL FACTORS (=)	TOTAL ATTACHED UNITS FUEL FACTORS
AB	MOGAS						
	DIESEL						
CE	MOGAS						
	DIESEL						
GN	MOGAS						
	DIESEL						
HG	MOGAS						
	DIESEL						
MH	MOGAS						
	DIESEL						
SG	MOGAS						
	DIESEL						
SV	MOGAS						
	DIESEL						
TI	MOGAS						
	DIESEL						
CC	MOGAS						
	DIESEL						
SR	MOGAS						
	DIESEL						
WV	MOGAS						
	DIESEL						
OV	MOGAS						
	DIESEL						
AV	JP-4						

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Worksheet F
FUEL WORKSHEET—PART B

FUEL CATEGORY	FUEL TYPE	DETACHED UNITS FUEL FACTORS (+)	DETACHED UNITS FUEL FACTORS (+)	DETACHED UNITS FUEL FACTORS (+)	DETACHED UNITS FUEL FACTORS (+)	DETACHED UNITS FUEL FACTORS (=)	TOTAL DETACHED UNITS FUEL FACTORS
AB	MOGAS						
	DIESEL						
	MOGAS						
CE	DIESEL						
	MOGAS						
	DIESEL						
GN	MOGAS						
	DIESEL						
	MOGAS						
HG	DIESEL						
	MOGAS						
	DIESEL						
MH	MOGAS						
	DIESEL						
	MOGAS						
SG	DIESEL						
	MOGAS						
	DIESEL						
SV	DIESEL						
	MOGAS						
	DIESEL						
TI	DIESEL						
	MOGAS						
	DIESEL						
CC	MOGAS						
	DIESEL						
	DIESEL						
SR	MOGAS						
	DIESEL						
	MOGAS						
WV	DIESEL						
	MOGAS						
	DIESEL						
OV	MOGAS						
	DIESEL						
	DIESEL						
AV	JP-4						

Worksheet G
WORKSHEET: ESTIMATE OF DAILY EQUIPMENT LOSSES/STATUS

ROW	ITEM	SOURCE/COMPUTATION	D + _____	D + _____	D + _____
BEGINNING EQUIPMENT POSTURE					
1	NUMBER AUTHORIZED	MTOE			
2	BEGINNING DAY NUMBER ASSIGNED	UNIT PROPERTY BOOK LINE 17 PREVIOUS DAY			
3	BEGINNING DAY NUMBER MISSION CAPABLE	EQUIPMENT STATUS REPORT OR LINE 16 PREVIOUS DAY			
DISPOSITION OF NON-OPERATIONAL EQUIPMENT					
4	TOTAL NON-OPERATIONAL FACTOR _____	TOTAL NON-OPN FACTOR TIMES ROW 3			
5	NON-REPAIRABLE FACTOR _____	NON-RPR FACTOR TIMES ROW 4			
6	REPAIRABLE FACTOR _____	REPAIRABLE FACTOR TIMES ROW 4			
DISPOSITION OF REPAIRABLE					
7	REPAIRED ON SITE FACTOR _____	ON SITE FACTOR TIMES ROW 6			
8	REPAIRED DSU FACTOR _____	DSU FACTOR TIMES ROW 6			
9	REPAIRED FACTOR _____	GSU FACTOR TIMES ROW 6			
10	EVACUATED TO TA FACTOR _____	EVAC FACTOR TIMES ROW 6			
DISPOSITION OF RETURNS/REPLACEMENTS					
11	RETURNS ON SITE (SAME DAY)	ROW 7			
12	RETURNS DSU (ONE DAY)	ROW 8 YESTERDAY			
13	RETURNS (THREE DAYS)	ROW 9 THREE DAYS AGO			
14	REPLACEMENTS	MMC			
15	TOTAL RETURNS AND REPLACEMENTS	SUM OF ROWS 11,12,13,& 14			
ENDING EQUIPMENT POSTURE					
16	ENDING DAY NUMBER MISSION CAPABLE	ROW 3 MINUS ROW 4 PLUS ROW 15			
17	ENDING DAY NUMBER ASSIGNED	ROW 2 MINUS ROWS 5 & 10 PLUS ROW 14			
18	EQUIPMENT READINESS	ROW 16 DIVIDED BY ROW 1			
19	EQUIPMENT STATUS	ROW 16 DIVIDED BY ROW 17			

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FM 101-10-1

Worksheet H
SUPPLY WORKSHEET

COLUMN 1		COLUMN 2	COLUMN 3		COLUMN 4		COLUMN 5	
		CONSUMPTION RATE LBS/MAN	COL 3A PERSONNEL STRENGTH D + _____	COL 3B STONS REQUIRED	COL 4A PERSONNEL STRENGTH D + _____	COL 4B STONS REQUIRED	COL 5A PERSONNEL STRENGTH D + _____	COL 5B STONS REQUIRED
ROW	CLASS OF SUPPLY	FM 101-10-1 HISTORICAL DATA	PDS RPT PERSONNEL PROJECTIONS	COL 2 TIMES COL 3A DIVIDED BY 2000	PDS RPT PERSONNEL PROJECTIONS	COL 2 TIMES COL 4A DIVIDED BY 2000	PDS RPT PERSONNEL PROJECTIONS	COL 2 TIMES COL 5A DIVIDED BY 2000
AA	I							
BB	II							
CC	III (PKG)							
DD	IV							
EE	V							
FF	VI							
GG	VII							
HH	VIII							
JJ	IX							
KK	X							
LL	TOTAL STONS ALL CLASSES	SUM OF ROWS AA THRU KK						

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GLOSSARY

Acronyms, Abbreviations, and Definitions

AAFEES	Army and Air Force Exchange Service	AWOL	absent without leave
ACE	armored combat earthmover	bbl	barrel(s)
actf	aircraft	bde	brigade
ACL	allowable cargo load	BFVS	BRADLEY Fighting Vehicle System
ACL-PF	allowable cargo load planning factor	biomed	biomedical
acq	acquisition	bn	battalion
ACV	amphibious craft vehicle	bph	barrels per hour
AD	air defense	brg	bridge
ADA	air defense artillery	bt	boat
ADAM	area denial artillery munition	btry	battery
admn	administrative; administration	C-E	communications-electronics
ADP	automatic data processing	cav	cavalry
ADPE	automatic data processing equipment	CB	construction battalion
AFB	Air Force Base	CBR	chemical, biological, and radiological
AFCS	Army facilities components system	cbt	combat
AFR	Air Force regulation	cen	center
AG	Adjutant General	CEWI	combat electronic warfare intelligence
ALOC	air lines of communication	cgo	cargo
ambt	ambulatory	ci	counterintelligence
AMC	Army Materiel Command	CID	Criminal Investigation Division
ammo	ammunition	cl	class
amph	amphibious	class	classification
anal	analysis	cm	centimeter(s)
AP	antipersonnel	cmd	command
API	armor-piercing incendiary	cml	chemical
approx	approximate	co	company
AR	Army regulation	coll	collection
ARAAV	armored reconnaissance airborne assault vehicle	coln	column
ARCSA	aviation requirements for the combat structure of the Army	comm	communications
armd	armored	COMMZ	communications zone
arnt	armament	comp	component(s)
ARNG	Army National Guard	COMSEC	communications security
arty	artillery	con	control
asl	authorized stockage list	CONEX	container express
ASP	ammunition supply point	CONRATE	consumption rate
asst	assistant	const	construction
assy	assembly	CONUS	continental United States
AT	antitank	convl	conventional
avg	average	coord	coordinator
AVGAS	aviation gasoline	COSCOM	corps support command
AVIM	aviation intermediate maintenance	crypto	cryptographic
avn	aviation	CS	combat support
AVUM	aviation unit maintenance	CSR	controlled supply rate

CSS	combat service support
ctr	center
cu	cubic
CUCV	commercial utility cargo vehicle
CZ	combat zone
DA	Department of the Army
DD	dishonorable discharge
decon	decontamination
def	defense
df	diesel fuel
DISC	Defense Industrial Supply Center
DISCOM	division support command
distr	distribution
div	division
DIVAD	division air defense
DMA	Defense Mapping Agency
DOD	Department of Defense
DODIC	Department of Defense Identification Code
dp	data processing
ds	direct support
ea	each
elec	electronics; electrical
engr	engineering; engineer
EPW	enemy prisoner(s) of war
equip	equipment
ESC	equipment serviceability criteria
evac	evacuation
EW	electronic warfare
exp	expandable
FA	field artillery
FC	field circular
FD	fire direction
FEBA	forward edge of the battle area
fld	field
flt	float; flight
FM	field manual
FORSCOM	United States Army Forces Command
fps	feet per second
FSC	federal supply classification
ft	feet
FTX	field training exercise
fwd	forward
fxd	fixed
FY	fiscal year
gal	gallon
GCWR	gross combined wheel rate

gd	ground
GEMSS	ground emplaced mine scattering system
gen	general
geur	generation
GP	general purpose
GPD	gallons per day
gs	general support
GSR	ground surveillance radar
hdlg	handling
hel	helicopter
HHB	headquarters and headquarters battery
HHC	headquarters and headquarters company
HHD	headquarters and headquarters detachment
HHT	headquarters and headquarters troop
HMMWV	high-mobility multipurpose wheeled vehicle
hosp	hospital
hp	horsepower
hq	headquarters
hr	hour
hvy/hv	heavy
IDAD	Internal Defense and Development
ident	identifier
IFR	instrument flight rules
IL	international logistics infrared
illum	illumination
IMC	International Morse Code
immat	immateral
in	inch(es)
incl	including
incr	increments
inf	infantry
info	information
insp	inspector
intcp	interceptor
intel	intelligence
ir	infrared
IRF	immediate reaction force
IRR	Individual Ready Reserve
IWWT	inland waterway terminal
JCS	Joint Chiefs of Staff
JOG	Joint Operations Graphic
JOG-A	Joint Operations Graphic—Air
JOG-G	Joint Operations Graphic—Ground
JOG-R	Joint Operations Graphic—Radar
JP	jet petroleum; jet pilot
JP 4	jet propulsion fuel, type 4

Glossary-2

FM 101-10-1

KCAS	knots calibrated air speed	MILPERCEN	United States Army Military Personnel Center
kg	kilogram(s)	multieng	multiengine
km	kilometer(s)	min	minute(s)
kmph	kilometers per hour	misc	miscellaneous
KTAS	knots true air speed	MLC	master labor contract
kw	kilowatt(s)	MLRS	multiple-launching rocket system
lab	laboratory	MLW	mean low water
LARC	lighter amphibious reconnaissance craft	mm	millimeter(s)
LASH	lighter aboard ship	MOGAS	military gasoline
LAW	light antitank weapon	MOM	military ordinary mail
lb	pound	MOPP	mission-oriented protection posture
LC	launching control	MOS	military occupational specialty
LCM	landing craft, mechanized	MOUT	military operations on urbanized terrain
LCU	landing craft, utility	MP	Military Police
LE	light equipment	mph	miles per hour
LID	light infantry division	MPI	military Police Investigators
LIN	line item number	mps	meters per second
LOA	length overall	MPSA	Military Postal Service Agency
loc	locator	MRE	meal, ready-to-eat
LOC	lines of communication	MSC	Military Sealift Command
LOGC	US Army Logistics Center	msl	missile
LOTS	logistics over the shore operations	MSL	mean sea level
LST	landing ship, tank	MTOE	Modification Table of Organization and Equipment
lt	light	MTON	measurement ton
LTON	long ton	mun	munition
LX	extra large	mw	microwave
m	meter(s)	NATO	North Atlantic Treaty Organization
MAC	Military Air Lift Command	nav	navigation
MACOM	major Army command	NBC	nuclear, biological, and chemical
MACR	Military Air Lift Command regulation	nc	noncommunications
MAIN	military authorization identification number	NCO	noncommissioned officer
maint	maintenance	NCOIC	noncommissioned officer in charge
maj	major	NM	nautical mile
man	manual	no	number
MANPAD	man-portable air defense	nondiv	nondivisional
mat	material; materiel	NSN	national stock number
max	maximum	obs	observation
MBA	main battle area	ofc	office
MCA	movement control agency	OIC	officer in charge
MCI	meal, combat, individual	op	operations(s); operator
mech	mechanic; mechanized	OPLAN	operation plan
med	medium; medical	ORP	ocean reception point
met	meteorological	pam	pamphlet
mgt	management	pers	personnel
mi	mile(s)	plt	platoon
MI	military impedimenta; military intelligence	POD	port of debarkation
mil	military	POL	petroleum, oils, and lubricants

POMCUS

psi

PW

pwr

PX

QM

RAAMS

RCLR

RDD

rdo

rdr

REFORGER

reg

regt

rehab

rep

RO/RO

RPMA

RSR

RSSP

S&S

S&T

SAM

sat

SB

SDC

SEABEE

sep

sf

sgt

SHORAD

SIDPERS

sig

SIGINT

SIGSEC

SP

spt

sq

sqdn

sr

sta

STANAG

std

stk

STON

stor

sup

prepositioning materiel configured to unit sets
pounds per square inch
prisoners of war

power

post exchange

quartermaster

remote anti-armor mine system

recoilless rifle

required delivery date

radio

radar

return of force to Germany

regulation

regiment

rehabilitation

repair; repairer

roll on/roll off

real property maintenance activity

required supply rate

ration supplement sundries pack

supply and service

supply and transport

space available mail

satellite

supply bulletin

sample data collections

sea barge

separate

square feet

sergeant

short-range air defense

Standard Installation/Division Personnel System

signal

signals intelligence

signals security

specialist; speciality; self-propelled

support

square

squadron

senior

station

standardization agreement

standard

stock

short ton

storage

supply

supv

survl

svc

sys

TAA

TAB

tac

TACFIRE

TC

TDY

tech

telecom

temp

tgt

tm

TM

TMDE

tml

TO

TOE

TOW

TP

TPD

TPFDD

TPFDL

TPH

TRADOC

trans

TRANSCOM

trk

trp

TV

UIC

UTC

US

USA

USAF

USAMMA

USAR

USAREUR

util

veh

whl

wpn

yd

ZI

supervisor
surveillance
service
system(s)

Total Army Analysis

target acquisition battalion

tactical

tactical fire direction system

training circular

temporary duty

technical; technician

telecommunications

temporary

target

team

technical manual

test, measurement, and diagnostic equipment

terminal

theater of operations

table(s) of organization and equipment

tube-launched, optically tracked, wire-guided

transportation priority

tons per day

time-phased force deployment data

time-phased force deployment list

tons per hour

Training and Doctrine Command

transport; transportation

transportation command

tracked, truck

troop

tracked vehicle

unit identification code

unit type code

United States

United States Army

United State Air Force

United States Army Medical Materiel Agency

United States Army Reserve

United States Army, Europe

utility

vehicle

wheeled

weapon(s)

yard

zone of interior

REFERENCES

REQUIRED PUBLICATIONS

Required publications are sources that users must read in order to understand or to comply with this publication.

FIELD MANUALS

8-10	Health Service Support in a Theater of Operations
9-6	Ammunition Service in a Theater of Operations
10-52	Field Water Supply
12-3-1	Separate Company/Battalion Level Personnel and Administrative Doctrine
12-3-3	Corps Level Personnel and Administrative Doctrine
12-3-4	Echelons Above Corps (EAC) Personnel and Administrative Doctrine
12-16	Replacement Operations
14-6	Comptroller/Finance Services in Theaters of Operations
55-1	Army Transportation Services in a Theater of Operations
63-1	Combat Service Support Operations, Separate Brigade
63-2	Combat Service Support Operations, Division
63-3J	Combat Service Support Operations, Corps
63-4	Combat Service Support Operations, Theater Army Area Command
63-5	Combat Service Support Operations, Theater Army
71-100	Divisional Cavalry Squadron
71-101	Light Cavalry Troop
100-1	The Army
100-5	Operations
100-15	Corps Operations
100-16	Support Operations: Echelons Above Corps (EAC)
101-5-1	Operational Terms and Graphics

RELATED PUBLICATIONS

Related publications are sources of additional information. They are not required in order to understand this publication.

AIR FORCE REGULATIONS

60-16	General Flight Rules
76-2	Airlift Planning Factors

ARMY REGULATIONS

11-11(C)	War Reserves (U)
40-3	Medical, Dental, and Veterinary Care
40-60	Policies and Procedures for the Acquisition of Medical Materiel
40-61	Medical Logistics Policies and Procedures
95-33	Army Aircraft Inventory, Status, and Flying Time
633-51	Civilian Internees Administration, Employment, and Compensation
700-8	Logistics Planning Factor Management

DEPARTMENT OF ARMY FORMS

2940-R Unit Loading Inventory and Checklist (Worklist)
2942-R Unit Train Loading Plan (Worksheet)

DEPARTMENT OF ARMY PAMPHLETS

608-41 The Army Family Action Plan II

DEPARTMENT OF DEFENSE REGULATIONS

4500.32R Military Standard Transportation and Movement Procedures

DEPARTMENT OF DEFENSE MANUALS

4525.6-M Department of Defense Postal Manual
Volumes I and II

FIELD MANUALS

3-9 Military Chemistry and Chemical Compounds
5-25 Explosives and Demolitions
5-34 Engineer Field Data
5-35 Engineer Reference and Logistical Data
5-100 Engineer Combat Operations
5-102 Countermobility
8-8 Medical Support in Joint Operations
8-9 NATO Handbook on the Medical Aspects of NBC Defense Operations
8-20 Health Service Support in a Combat Zone
8-21 Health Service Support in a Communications Zone
8-55 Planning for Health Service Support
10-13 Supply and Service Reference Data
12-3-1 Separate Company/Battalion Level Personnel and Administrative Doctrine
12-3-2 Divisional/Separate Brigade Personnel and Administrative Doctrine
12-3-3 Corps Level Personnel and Administrative Doctrine
26-2 Management of Stress in Army Operations
55-2 Division Transportation Operations
55-10 Army Movement Management Units and Procedures
55-12 Movement of Army Units in Air Force Aircraft
55-13 Air Transport of Supplies and Equipment: Standard Loads in Air Force C-5 Aircraft
55-15 Transportation Reference Data
55-17 Terminal Operations Coordinator's Handbook
55-20 Army Rail Transport Operations and Units
55-30 Army Motor Transport Units and Operations
55-50 Army Water Transport Operations
55-60 Army Terminal Operations
55-65 Preparation for Unit Movement Overseas by Surface Transportation
57-38 Pathfinder Operations
101-5 Staff Organization and Operations
101-10-2 Staff Officers' Field Manual: Organizational, Technical and Logistic Data, Extracts of Nondivisional Tables of Organization and Equipment

References-1

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Classes of Supply

MILITARY AIRLIFT COMMAND REGULATIONS

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Airlift Operations

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C-5 Airlift Operations

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C-141B Configuration/Mission Planning

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Tactical Airlift Operations

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C-141B Strategic Airlift Operations

MILITARY AIRLIFT COMMAND SUPPLEMENT

1

General Flight Rules

NATO STANDARDIZATION AGREEMENTS

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Road Movement Documents

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Surface Transport Request and Reply to Surface Transport Request

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Procedures for Military Trains Crossing Frontiers

2173

Regulations for the Securing of Military Tracked and Wheeled Vehicles on

2175

Railway Wagons

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Classification and Designation of Flat Wagons Suitable for Transporting

2890

Military Vehicles and Equipment

Restrictions for the Transport of Military Equipment on European Railways
Security in the Transport of Military Ammunition and Explosives by Rail

SUPPLY BULLETINS

38-26(C)

Nonnuclear Ammunition Supply Rates (U)

710-2

Supply Control: Combat Consumption Rates for Ground and Aviation-Type
Petroleum Products

TABLES OF ORGANIZATION AND EQUIPMENT

55-530H6

Transportation Watercraft Teams

55-560H4

Transportation Terminal Service Teams

TECHNICAL MANUALS

5-210

Military Float Bridge Equipment

5-301

Army Facilities Component System — Planning

5-302

Army Facilities Component System — Design

5-303

Army Facilities Component System — Logistical Data and Bills of Materiel

5-312

Military Fixed Bridges

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Planning and Design of Roads, Airbases, and Heliports in a Theater of

5-343

Operations

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By Order of the Secretary of the Army:

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